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A PARADIGM FOR THE 205
1965-1975 STRATEGIC DEBATE

PART   I: "The Basic Paradigm"
PART II: "The Seven Levels of Analysis"
PART III: "Recapitulation and Synthesis"

Edited by Herman Kahn

HI-202-FR   November 22, 1963

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PREFACE AND ACKNOWLEDGMENTS

Compared to most reports addressed to DDR&E, this one lays great stress on methodology. DDR&E's responsibility is in important respects methodological; that is, it works with a vast program of research and development in which the gathering, analysis, and dissemination of information about feasibility and desirability is probably as crucial to success as any other aspect of research administration. (We discuss this process in Chapter III.) The organization and facilitation of such information-processing should be a major activity of DDR&E, and we believe that this report can contribute in an important way to that objective. In addition, the existence of an appropriate unclassified methodological report to which more specialized reports (by Hudson and other organizations) can refer makes it easier to focus subsequent reports on the major issues that interest decision-makers without digressive discussion of important methodological or political points which can then be incorporated by reference. This is particularly important for those who wish to use the context set forth in Chapter V, but do not feel it within their interests, expertise, or the limitations of their time to prepare and argue the relevance of such contexts.

The report itself is called a "Paradigm"[1] and emphasizes "propaedeutic"[2] and "heuristic"[3] devices. We use these relatively unfamiliar words in order to call attention to the importance of being consciously and intellectually aware of what we are doing; these terms emphasize the three major aspects of this report.

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[1] A paradigm is usually defined as a model or a pattern. While we use the above definition to some degree, we will, following Merton (see pages 68-70) use the term to describe an explicitly structured set of assumptions, definitions, typologies, conjectures, analyses, and questions. It is more than a metaphor in attempting to be relevant and rigorous and less than a model in its definiteness, preciseness and analyzability.

[2] According to Webster, propaedeutic is--"of, pertaining to, or conveying preliminary instruction; introductory to any art or science." It is just because DDR&E and the Department of Defense must synthesize an enormous number of considerations, as indicated by such charts as Comparison of the Five Basic Central War Strategies (page 37), or Basic National Security Policy (page 46), that so many new considerations and new disciplines have to be brought to bear on many specific questions. Eventually such integration must take place in a single intelligence. The only way to get it done is to cram, rapidly and efficiently, the necessary knowledge and analyses into that single intelligence. This means that propaedeutic tools and techniques are of extreme importance.

[3] According to Webster, heuristic is--"serving to discover or to stimulate investigation; a method of demonstrating which tends to lead a person to investigate further by himself." This last needs no additional comment as to its value.

Relationship of This Report to Other Work Going on at the Institute

The Hudson Institute research program in the general area of strate-
gic warfare is currently supported by several different contracts and by
some of the Institute's general funds. While the various studies are all
independent and provide different points of view and emphases in the ap-
proach to central war problems, as a group they also provide an integrated
view of these problems. Indeed, both the research and the reports have
been strongly influenced by our attempt to carry out an integrated research
program and to prevent unnecessary overlap among various projects. Thus
this report to the Office of the Director of Defense Research and Engineering
is closely related to, and complements, the following other studies:

1. Crises and Arms Control (for the Deputy Assistant Secretary
    of Defense (International Security Affairs) for Arms Control)[4]

2. Hypothetical Narratives for use in Command and Control
    Systems (for the Electronic Systems Division of Air Force
    Systems Command)[5]

3. The National Interest in International Security (supported
    by the Martin-Marietta Corporation)[6]

4. Comments on Current Central War Procurement Programs (for
    the Assistant Secretary of Defense (Comptroller) of the
    Office of the Secretary of Defense)[6]

5. Some Alternative Central War Postures and Tactics (for the
    Office of Civil Defense, the Director of Defense Research
    and Engineering and the Comptroller's Office, all of OSD)[6]

6. Civil Defense and Central War Strategies (for the Office
    of Civil Defense)[6]

All of these studies are concerned with the possible or likely uses
of force in peace or war during the time period 1965-1975. Because this
time period will be referred to repeatedly, we will call it, in capitals,
"the Decade."[7]

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[4]HI-180-RR, October 9, 1962. See also A.J. Wiener and H. Kahn, "Sum-
mary of Recommendations From Crises and Arms Control," HI-288-RR, Sept. 9, 1963.

[5]HI-285-RR, September 1963.

[6]Not yet published.

[7]A partial exception to the use of this ten-year span as a frame for
the analysis is the force composition study of the U.S. strategic posture
that is being done for the Assistant Secretary of Defense (Comptroller)
of the Office of the Secretary of Defense. Since the purpose of this study
is to provide a commentary on the current U.S. strategic force procurement
program, it is concerned mostly with the time period up to 1970.

The ESD study is based on a set of alternative world futures that supply a framework for a study of command and control problems that might arise in crises. A revision and extension of these World Futures, from a somewhat different point of view than was developed for ESD, forms the bulk of Chapter V of this report. The world futures program and the scenarios derived from it have been very useful in supplying a military-political context for various kinds of gaming and scenario-writing at the Hudson Institute. As an adjunct to the ESD study, we have put together a "card deck" that contains a broader (but less detailed) summary of different future military-political world environments. This card catalogue is primarily a teaching and learning device, and is also useful for orienting students to the possibility of using the Alternative World Futures report as a serious research tool.

The Martin-Marietta contract on The National Interest in International Security has been a helpful complement to the work in this report on national goals and projections of future possibilities, and will, when it is published, be a continuation of this research.

The Comptroller study (Comments on Current Central War Procurement Programs) considers existing force posture and describes possible alternative short-term packages based on several possible basic national security policies and several budget levels. The objective is to analyze the principal marginal choices involved in the packages described. There is also some consideration of the legacy value in the early '70's of the force postures that have been projected through 1970.

The analysis of central war strategy both in the Strategic Framework report and in the Comments on Current Procurement report makes use of a separate project on Alternative Central War Postures and Tactics. The purpose of this support project is to generate fairly detailed force postures that are appropriate for different central war strategies during the Decade. Having such studies available makes possible the use of concrete and plausible analogies and illustrations and provides a detailed context for use in discussion and analysis.

Another research effort that influenced our discussion of alternative strategies is our study for OCD of the interaction of nonmilitary defense measures and national security policies as they might occur in alternative future non-warring worlds. The definition of future worlds has also been aided by our work for ESD. It has proven feasible to proceed from comparatively concrete descriptions of future worlds and effectiveness of nonmilitary defense to a discussion of strategies which not only includes some of the more important ones mentioned in our earlier DDR&E report but some different ones which emphasize new concepts.

There will be five or ten separate papers accompanying and following this Strategic Framework Report. Already substantially complete are an analysis of strategic warfare in space, analyses of China's and of Europe's present and potential military capabilities, a discussion of technologies associated with different central war strategies and World Futures, and some comments on the Nth country problem. In preparation are papers concerned with related topics.

The editor would like to thank those members of the Hudson Institute staff named on the title page as co-authors for their important contributions to various sections of this report; in addition, he would like to thank the following for their helpful suggestions: Donald G. Brennan, Sara Dustin, Nancy Engel de Janosi, William Pfaff, Shirley L. Rubinow, and Anthony J. Wiener. He would also like to thank Brigadier General Glenn A. Kent (USAF) and Dr. Fred A. Payne of the Strategic and Defensive Systems Office of the Director of Defense Research and Engineering for their help, support, and advice.

Early drafts of this report were circulated to the full staff of the Hudson Institute and comments and criticisms were solicited. Although there was a high degree of consensus, several disagreements and criticisms were returned that for various reasons the editor either could not take into account or chose to express his personal position. While the Hudson Institute, of course, takes responsibility for the quality of work under the contract, the Institute inherently cannot take positions on specific policy issues. These are solely the province of individual members of the research staff. Thus the Trustees and Members of the Institute, the officers, the research staff, the consultants, and even most of the named contributors to this report are not necessarily responsible for all the judgments, recommendations, and conclusions expressed; the final editorial and substantive decisions were made solely by the editor.

A PARADIGM FOR THE 1965-1975 STRATEGIC DEBATE

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PART I: "A Description of the Basic Paradigm"

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CHAPTER I

INTRODUCTION

Purpose of Report

This report attempts to provide tools for the discussion of strategic warfare in the Decade (1965-1975). It undertakes to provide a conceptual framework to facilitate systematic and precise discussion, and methodological principles and concepts to illuminate the main controversies and issues. Many of the controversies will be familiar; but we shall also consider problems that have not had the attention they deserve. In particular, this report will pay special attention to action-reaction loops, the moral and political acceptability of strategic choices, and the exploitation of and defense against potential or actual asymmetries between us and the Soviets. Later reports will apply this framework to various substance aspects of the debate and to interactions with European, Chinese, and Nth country issues.

Ordinarily, a strategic debate does not reach an executive office or an executive department in the form of well-defined alternatives. Various elements in a debate are decided as they come up for discussion: should we have an AICBM, or how much money should we put into acquiring one, or how flexible, reliable, and invulnerable should command-and-control systems be? Such questions are usually considered partially in isolation and partially in a (usually implicit) over-all strategic framework. However it is likely that such discussion would be more fruitful if there were greater explicit recognition of the general contexts which can underlie any strategic discussion, and of the over-all choices from which specific choices can, to some extent, be derived. It is almost certain that there would then be more integration among relevant working and staff groups and various levels of decision-making both in and outside the formal administrative structure.

Startling misallocations of emphasis have occurred in the past. For example, one may ask U.S. analysts for the most likely ways in which a TN war might start; most of them will give approximately the list that follows:[1]

1. Very tense crisis--Inadvertent War
2. Very tense crisis--S.U. Calculated Strike
3. Very tense crisis--U.S. Calculated Strike
4. Normal situation--Inadvertent War
5. Normal situation--S.U. Calculated Strike
6. Normal situation--U.S. Calculated Strike

Yet it is fair to state about 90 per cent of professional attention in the '50's was directed to the fifth possibility and about 10 per cent to the

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[1]According to more or less formal polls conducted by Paul Johnstone of WSEG and Olaf Helmer, Herman Kahn, Andrew Marshall, and Thomas Schelling while at RAND.

fourth; by and large, Numbers 1, 2, 3, and 6 were almost ignored.[2] This
is a widely known example of past misemphasis. (Some of the credit for
change must be given to the deliberate use of such methodological devices
as scenarios and war games which directed attention to possibilities
Number 1, 2 and 3.) It is useful to remind ourselves that for many years
a situation existed in which senior and responsible analysts, who had
authority to decide their ground rules, spent most of their time on prob-
lems which, in their own opinion, were relatively unimportant in compari-
son with problems they could have been studying in the same area of re-
sponsibility. We will discuss similar situations later. In this never-
never-land of preparing for hypothetical situations, spending one's time
on the less important problems and neglecting the more important ones not
only could happen; it is still happening.

Difficulties can also arise from not making context or other consid-
erations explicit. For example, several contributors to this report have,
sitting on committees, noticed how often the recommendations of the com-
mittee were determined by its members' (implicitly) asking: Given my
judgment of what the government's current policy ideally ought to be, does
this particular recommendation or decision make any sense? While this ques-
tion may be worth asking and answering, it may be equally important to ask
whether the recommendation makes sense in terms of what current government
policy is (to the extent that one can determine what it is) or what the
government (as opposed to the committee member) would like it to be.

Equally often advice is given which purportedly arises from technical
considerations within the advisor's area of competence or responsibility,
but actually is motivated by considerations which come from an entirely
different area. Thus, technical people who (perhaps unconsciously) fear an
acceleration of the arms race or are satisfied with a Finite Deterrence
strategy (as discussed in the next chapter) argue the technical infeasi-
bility of new weapons (e.g., Why push hard for an AICBM for 1968 or 1970?
The Soviets will have simple countermeasures, or counter-counter-counter-
measures, which render our system ineffective) when their real concern is
excessive feasibility--the fear of touching off an offense-defense arms
race. Or one finds weapons experts arguing the infeasibility of a conven-
tional defense in some area when they are mainly concerned with their judg-
ment of its undesirability. Similarly, foreign policy experts or politi-
cians may argue about the political undesirability of civil defense, or
preparations for conventional war, when they are really concerned about
feasibility or cost-effectiveness analysis. The above tendencies may be
strengthened if the experts feel that decisions have been dominated by
excessively specialized considerations. Some experts may even hedge their
own advice in order to balance the assumed bias or to express, perhaps un-
consciously, their own counterbiases. Thus the expert's attitude toward
technical or specialized questions will often depend on a policy question.
Yet normally such policy considerations should not be allowed to influence
the report or advice through implicit hedging or slanting. If implicit
bias does exist, the committee or advisor is likely to be (usually unknow-
ingly) either exceeding its jurisdiction or evading its responsibilities.

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[2]Number 6, we believe, can justifiably be ignored.

Debates and choices ought to be consciously framed to take place in
an explicitly defined and meaningful context. Reports like this one may
provide some of the methodology in advance. This can also have a desirable
by-product: since a context appropriate to a given discussion often is
discovered or invented only after a good deal of time-consuming discussion
and debate, working within an explicit methodology may considerably enhance
efficiency. For example, in such discussions it almost always happens that
some version of the Alternative Central War strategies of the next chapter
is reinvented--a sometimes agonizing act of creation which is very waste-
ful of time and energy.

There will be few attempts in this study to be definitive or prescrip-
tive. At this point of the analysis we ordinarily can only make tentative
suggestions. In the work statement it is suggested that:

> The objective of this study would be to obtain some orienta-
> tion about developments that may take place in doctrine and
> concepts; it is not to do an over-all systems analysis de-
> signed to determine proper weapons mix. It is expected that
> this study will provide some guidance, of a liberating and
> suggestive kind, for use in making development decisions, but
> it is not intended that this guidance would be in the form of
> specific constraints or a specific proposed balance among
> various weapon systems. The general point of view from which
> the study will examine development problems will be that of
> the potential user; thus an attempt will be made to examine
> the full range of political-military situations that are
> reasonably possible.

We have put some thought into how we could satisfactorily fulfill the
above and have defined a set of ten proximate objectives as listed below,
which we suggest should be more or less standard for this kind of discus-
sion and analysis. These are:

1. To stretch the imagination and improve the perspective;
2. To clarify, define, name, expound, and argue major issues;
3. To formulate and study many alternative "packages" and contexts;
4. To clarify current choices--(hedging, contingency planning and
   compromising;
5. To create propaedeutic and heuristic methodologies and paradigms;
6. To identify and understand developing patterns;
7. To improve learning, communication, and intellectual cooperation--
   (by the use of historical examples, scenarios, metaphors, analytic
   models, concepts and language)
8. To furnish specific substantive knowledge, conclusions, recommend-
   ations and suggestions;
9. To broaden and improve the basis for over-all political decision-
   making; and
10. To increase the likelihood of rapid and appropriate reaction to
    new patterns and unexpected crises.

Because we think it is important to have a full discussion of these
objectives we have devoted Chapter IV to this purpose.

Notice that the length of the list is not a strength. Rather it reveals a systemic weakness. If one asks a doctor to minister to an illness, the doctor does not suggest that he will stretch the imagination or improve the perspective of his patient. If one asks a shoemaker to fix a pair of shoes, the shoemaker does not clarify, define, name, expound, and argue the major issues--he fixes the shoes. An engineer is concerned with providing a set of blueprints which the customer can faithfully follow, rather than with the formulation of many alternative packages.

We would specifically emphasize that our ten objectives, while all useful, are very far from an attempt to blueprint the future or make the planning process the inexorable output of a methodology. On the contrary, it seems to us that even the most pragmatic and expedient of decision-makers could profit from studies which fulfilled these objectives. Indeed such studies are often directly aimed at improving an ability to "muddle through" because they increase flexibility and add new alternatives. They "plan" for muddling; they do not provide rigid, detailed blueprints of an all-encompassing national strategy.

Content and Organization

The report is divided into three parts:

      I.   A Description of the Basic Paradigm
     II. Comments on and Discussion of the Seven Levels of Analysis
    III. Recapitulation, Reformulation and Synthesis

In Part I we describe the basic paradigm we are going to use and hope to develop further. The concept and properties of a paradigm are discussed under Objective 5 (pages 68-71). As mentioned (note 1 page i), we can think of it as being a structured set of explicit assumptions, definitions, typologies, conjectures, analyses, and questions, roughly speaking something between a metaphor and a model.

Chapter II contains a preliminary discussion of Alternative Central War Strategies (ACWS's). There are fifteen of these as listed below, though only those underlined are likely to represent serious policy choices for the U.S. in the Decade (1965-1975), at least vs. the Soviet Union. (Vs. China we might also have WS, LSR, CPW, or CFS.)

    1. Minimum Deterrence (MD)
    2. Finite Deterrence (FD)
    3. Strategy as Currency (SC)
    4. <u>Mostly Finite Deterrence</u> (MFD)
    5. War Stopping (WS)
    6. <u>Arms Control Through Defense</u> (ACD)
    7. Contingent Homicide (CH)
    8. <u>Deterrence Plus Insurance</u> (DI)
    9. <u>Expanded Insurance</u> (EI)
   10. Limited Strategic Retaliation (LSR)

11. <u>Not Incredible Counterforce First Strike</u> (NCF)
12. Contingent Preventive War (CPW)
13. Credible First Strike (CFS)
14. Pure Massive Retaliation (PMR)
15. Not Incredible Massive Retaliation (NMR)

These strategies are discussed in just enough detail to enable the reader
to bear them in mind and to alert him to some of the major issues that
will arise. Chapter III then provides an overview of the report as a
whole and an explanation of how to formulate the discussion of ACWS's in
a Basic National Security Policy (BNSP) framework. In particular, seven
levels of analysis that underlie the entire discussion are described.
They are as follows:

The Seven Levels of Analysis

1. Beyond the national interest
2. The national interest and beyond
3. The national interest
4. Political-military objectives
5. Purposes, requirements, and criteria
6. Two-sided postures, capabilities and systems
7. Each side's basic capacities, resources, and
    weaknesses.

These levels are related in turn to those most directly responsible
at each level:

The Hierarchy of Those with Special
Responsibilities for Central War

1. Humanity, the United Nations, ethical and
    moral leaders
2. A mixture of levels one and three
3. The President, Congress, and various political
    groups and electorates
4. The National Security Council and associated
    organizations
5. The Secretary of Defense and the Joint Chiefs
6. The services themselves, unified and specified
    commands, and various special departments and
    agencies of government
7. Just about everybody.

The necessity and difficulties of integration among levels is dis-
cussed. Chapter IV describes and elaborates the 10 objectives noted on
the previous page. While it is a logical successor to a description of
the research framework, it is also to some degree a digression. But we
have found that in dealing with future possibilities, it is important to
be consciously and intellectually aware of the problems, biases, and capa-
bilities of various analyses and approaches. It is not sufficient to rely
on one's unconscious intuitions no matter how successful these may have been
in the past. Part or most of the experience upon which intuition is based

will be irrelevant or misleading. For this reason, the words "conscious"
and "intellectual" appear often in this report--as a reminder that we are
trying something both ambitious and risky: to marry empirical and intui-
tive political and military judgment with analytical and hypothetical dis-
cussions. In the past, excellent analytical and "literary" discussion
has not proven superior to good judgment where judgment was available.
However, today nobody has enough relevant experience in the art and prac-
tice of thermonuclear war, or even in the art and practice of diplomacy
in a world in which thermonuclear weapons are becoming increasingly avail-
able (and increasingly un-usable).

There is another reason we need to be explicit--consciously and in-
tellectually aware of the bases of our judgments. In a rapidly changing
situation, decision-makers must make decisions on new information, but in
order to keep their ability to act on intuition and "judgment" they have
to keep constantly in mind why they believe what they do. Otherwise, new
information which contradicts deeply-held beliefs that are themselves the
result of a long-forgotten learning process of now unconsciously held data
will be disorienting; the decision-maker will be unable to evaluate new
data against the "forgotten" old. This lays severe demands on executives
and administrators as well as decision-makers; it calls for an openness
of mind and a detachment that is more "ivory tower" scholar than man of
affairs. We are not recommending that decisions be turned over to scholars:
that might be a disaster. We are recommending that the decision-maker
acquire some scholarly attributes. It is the purpose of this report to
analyze and list the reasons behind, and elements in, a few policy and
strategic beliefs so that they can be checked against the facts currently
known, and against others as they become known, and be kept available for
continuous analysis and reanalysis.

One of the characteristics of debates is that time is limited, and
it is important to put first problems first. Unfortunately, such pri-
orities are often overwhelming. The "important and urgent" often cause
the near total neglect of the "important but not urgent." An added fac-
tor is the "tyranny of the In-Out box"--the "urgent but not important."
Unfortunately, tenth and twentieth priority problems, if handled badly,
can be fatal. Our paradigm can be useful in drawing attention to a whole
range of problems; even if it takes some attention away from first priority
problems.

Chapter V continues with the framework and describes a range of hypo-
thetical worlds and scenarios which can be used to generate requirements
and to provide a context for discussion, scenario writing, gaming, and ana-
lytic evaluations. This chapter concludes Part I.

Part II is the core of the report. It discusses and illustrates the
use of the paradigm. Five of the six chapters focus on a level of analysis.
(The first three levels are treated together as the national goals.) It is
customary to present such considerations in an order dictated by ascending
or descending levels of abstractions, more usually descending. One then

begins with the most abstract goals ("beyond the national interest") and descends quickly to more concrete matters. The general principles often get lost and do not affect the detailed discussion. Less often one begins with realistic detail only to conclude with a rhetorical bow in the direction of abstract principles. In either case the integration fails; the abstract levels of analysis usually do not affect the particulars, or vice versa.

Partly in order to integrate the discussion, partly to emphasize the abstract levels as much as possible and partly because we find the order convenient in terms of decreasing the necessity for forward references, we have departed from the normal ordering, and inserted the most abstract levels into the center of the discussion. We begin with Level Seven, the basic national capacities and resources on which each side can draw in making up a Central War strategy and the weaknesses which it must alleviate or guard against. Typically it is asymmetries at this level that enable one nation to triumph over another, and a study of how one might exploit or guard against such asymmetries is essential to a sound evaluation. We then discuss Level Six, the Central War posture of each side, as determined by the various elements and systems and their respective technical capabilities and weaknesses. Next, we consider (Chapter IX, Level Five) the Central War forces and organizations as specified and characterized by their immediate purposes, requirements, and criteria. In principle, Level Four, the political-military objectives, should come next, but it is inconvenient to discuss these until there has been some explication of the national goals (the first three levels of analysis), so in Chapter X we discuss 1) the ideals, objectives, and hopes we hold, beyond our national interests, narrowly conceived, for various human communities; 2) enlightened self-interest as an intimate mixture of considerations from the narrow national interest and from beyond the national interest; and 3) the national interest as given by the immediate well-being and security of the people of the United States. Only then are we in a position to take up political-military strategies and working objectives that utilize Levels Five, Six, and Seven, as means, to advance Levels One, Two, and Three, as ends.

Throughout, the emphasis is on presenting an integrated discussion that is directly useful to those at Levels Five and Six who are concerned with details of procurement and R&D policies, as these are affected by higher considerations or by the technical requirements of a range of strategies and tactics.

Rather startlingly, in spite of the enormous current interest in national security issues and the consequent expansion of scholarly and professional work, there is relatively little serious sophisticated consideration of this last--the military requirements, advantages, and weaknesses of various central war strategies and tactics. There are many reasons for this, but perhaps the most important is a psychological block-- even among professionals and scholars.

When the atom bomb was invented, many scholars, professionals and informed laymen felt that strategy and tactics, as they had been understood, had now come to an end. This feeling was reflected in such phrases as "the absolute weapon," and in many aphorisms and analogies that made the point, more or less dramatically or ironically, that the inevitable result of a nuclear war would be mutual homicide. Since this would happen

no matter what tactics were used, tactical theory was clearly irrelevant.
Strategy was equally clearly irrelevant, since it could not be an objec-
tive of strategy to bring about the annihilation of the nation. Therefore,
the invention of the atomic bomb had brought about an end to strategy and
tactics and even to thinking (i.e., atomic war had become unthinkable--both
literally and figuratively). And, in fact, most of the strategists and
technicians were so awed by the existence of this new weapon that they
almost did stop thinking.

On the military side, this block against thinking sometimes resulted
in the usual psychological denial--atomic bombs were simply "bigger bombs,"
or "quality weapons." Indeed, initially strategic targeting and tactics
were almost identical to those used in World War II. Sometimes there was
an attempt to correct the mistakes of World War II, as disclosed, for
example, by the Strategic Bombing Survey (e.g., power stations were made
high-priority targets), but these attempts just made clearer the lack of
serious creative thinking.

In the late '40's and early '50's there was a partial revival of
thinking which led to some initial discussions of the various options
open to a potential nuclear attacker. Particularly studied were the
tnreats he might make and the appropriate tactics if threats failed. The
counter-options available to the defender were also examined. The dis-
cussion on such topics as rationality-of-irrationality, withholding tac-
tics, various mixtures and levels of counterforce and countervalue target-
ing, and so on, almost reached a high level of sophistication. This dis-
cussion came to a sharp end with the development of the H-bomb, which sub-
jectively did seem to be so close to a Doomsday Machine that details now
really were irrelevant. Multimegaton weapons seemed to be unusable for
any rational, and even many irrational, purposes. So once again there
was a block in strategic thinking. In a well-known article[3] "Strategy
Hits a Dead End," Bernard Brodie stated:

> One of the commonest slogans in strategic literature is
> the one inherited from Jomini, that "methods change but prin-
> ciples are unchanging." Until yesterday that thesis had much
> to justify it, since methods changed on the whole not too
> abruptly and always within definite limits...There could there-
> fore be a reasonable choice among methods of fighting a war or
> "strategies." If the time has not already arrived for saying
> good-by to all that, it will inevitably come soon...

Brodie ended the article with the following exhortation:

> In a world still unprepared to relinquish the use of
> military power, we must learn to effect that use through
> methods that are something other than self-destroying. The
> task will be bafflingly difficult at best, but it can only
> begin with the clear recognition that most of the military

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[3]Harpers Magazine, October, 1955.

ideas and axioms of the past are now or soon will be inap-
plicable. The old concepts of strategy, including those of
Douhet and of World War II, have come to a dead end. What
we must now initiate is the comprehensive pursuit of the
new ideas and procedures necessary to carry us through the
next two or three dangerous decades.

Today we are beginning again the comprehensive pursuit of new ideas
and procedures. We realize that, terrible as these weapons are, they
exist, and therefore they may be used--in any case their use will be
threatened and such threats are a kind of use. As the editor of this
report stated in a recent book:

When we deter the Soviets by the threat that if they provoke
us in a limited war, subsequent reprisals may blow up into
an all-out thermonuclear war, we are deliberately or inad-
vertently _using_ the threat, and therefore the possibility,
of nuclear war. When we tell our allies that our Strategic
Air Command protects them from Soviet aggression, we are in
a sense _using_ nuclear war.

This deliberate terminology may arouse animosity from
both the "Right" and the "Left." The Right, often wishing
to stand firm, does not like the reasonably correct impli-
cation that if we deliberately accept .01 chance of killing
100,000,000 people we have in a probabilistic sense "killed"
1,000,000 people, which itself raised several moral issues.
The Left tends not to like the implication of acceptability
and necessity in the word "use." Either of the above objec-
tions could be correct. Perhaps we should use war, but not
mention, discuss, or analyze this use. Perhaps we should
do all these things privately, but not publicly. I do not
know whether any or all of these propositions are right or
wrong, but I think they are wrong.

In any case, we have procured nuclear equipment and
intend to maintain it, unless and until better arrangements
can be worked out. We should understand that these actions
necessarily imply a possibility of both deliberate and inad-
vertent thermonuclear war. It would be every bit as irre-
sponsible to ignore the resulting risks as it would be to
overstate them deliberately in the hope of influencing
policy through persuasive but incorrect arguments.[4]

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[4] Herman Kahn, _Thinking About the Unthinkable_, Horizon Press (New York,
1962), pp. 101-103.

Rather ironically, much of the strategic and tactical discussion in
this report would have been most relevant in the '50's and early '60's
when forces on both sides were vulnerable and the United States had an
enormous strategic advantage. It would have then been quite reasonable
to ask how thermonuclear wars might be fought and terminated in such a
way as to be advantageous to the United States. This discussion just got
started by the end of this period and barely influenced policy until quite
recently. Furthermore, the discussion now seems to be dying down again
because there is once more a feeling that, as both sides develop relatively,
or absolutely, invulnerable forces, strategy and tactics really will come to
a dead end. There may be some justification for this feeling, in the sense
that certain traditional tactics and strategies may be almost completely
disregarded. Nevertheless, the feeling is misleading. New strategies and
tactics may be invented and become more important than ever. In some sense
we may now expect a strategy or tactics competition to complement the tech-
nological competition and partially to substitute for it. In a balance-of-
terror environment, technological changes may be relatively unimportant un-
less they upset the balance of terror or allow for new strategies or tactics.
However, men are inventive, and as long as the equipment exists or is avail-
able, they are likely to figure out new and ingenious methods of obtaining
benefits from it.[5] In any case, even if the balance of terror becomes rela-
tively stable, war can still occur. And particularly in the balance-of-
terror situation the difference between intelligent, sophisticated, and
rational use of the weapons, and stupid, thoughtless, or emotional use
will loom very large indeed. Regardless of which of these two effects
dominates--decreasing likelihood of use or greater difference between
"good" and "bad" use--good strategies and tactics will still be needed--
even if the lessened probability of an agonizing situation arising makes
it seem less important. And, of course, expectations or concern about es-
calation may dominate or influence peacetime relations and crises. Thus,
the difference between good and bad tactical planning can be important in
peace--particularly in preserving the peace.[6]

Part III starts the iterative process. It recapitulates, reformu-
lates, synthesizes, assesses, and in effect starts the next iteration.
For example, in Chapter III the discussion was deliberately over-sim-
plified in order to get some useful terminology and concepts and a wide
range of Central War options out on the table. In Chapter XII we attempt

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[5]See ISA Crisis Report, HI-180-RR, Chapters III and IV--particularly
discussion on pages 155 to 160 in Chapter IV on "How to Hypothecate Force
in a Balance of Terror Environment."

[6]See Chapter VI, pages 129-132, for a discussion of the effect that
changes in the balance of terror can have on assurance in crisis and
escalation situations.

to provide a fuller, more sophisticated (but still crude) discussion
since:

1. Some of the strategies are abstract versions of realistic
   choices for the U.S. Thus, the discussion of them should
   be directly relevant to practical strategic and policy
   planning.

2. The strategies provide a convenient framework with which
   to organize a variety of miscellaneous ideas and points,
   so that they can be presented and considered in a logical
   context.

3. Iteration is essential to the process of getting a good
   ACWS. First we use the strategies (simply stated) to
   help explain and consider the levels of analysis, then
   we use the levels of analysis to help explain and con-
   sider the strategies more completely, and then we start
   again.

There are also three Appendices in Part III. The first contains a
discussion of terminology in a form which we hope is both readable and
usable for review or learning purposes. It might be advantageous to
readers not familiar with the "jargon" to read this appendix twice--
once before they read the report and a second time before reading Chap-
ters XI and XII.

The next appendix contains a systematic and methodical presentation
of the fifteen ACWS's in a format which makes the description of each
and most of the major issues available for easy reference and comparison.

The last appendix reprints some world futures from the ESD report
with a "commentary" or description of these worlds in another form as
discussed in Chapter V of this report.

Throughout this report we concentrate on methodology--to provide a
framework for the strategic debate rather than a resolution. We are in-
terested in formulation, clarity, and explicitness and most important
of all the explication of a context and organic whole and not mere con-
geries of miscellaneous points. The previously mentioned later reports
will focus more on substantive issues.

The result of this synthesis should be a respectable attempt to im-
pose, hopefully without doing too much violence to reality, a new order
and system on the problems of strategy and tactics and the contexts in
which they are considered. Such an attempt will, of course, automatically
warp some aspects of reality. Because of its tendency to be rigid and
mechanical (which we will attempt to soften as much as possible) it will
not constitute a wholly satisfactory method for treating the more subtle
interactions between nations, or even the subtle influences that could
affect DDR&E programs. But at the minimum, it will provide a useful check-
list or control of other methods of analysis and a catalog of arguments to

stimulate, restrain, provoke and discipline the strategic debate of 1965-1975. If moderately successful it should provide a floor beneath the debate--a proper vocabulary by itself provides a minimum level of sophistication and knowledge. At best, the synthesis could be a major crea ive enterprise giving rise to new conjectures, concepts and nuances, and even to a methodology to develop "theorems" and near-"theorems" about the strategic problems of national security and international order. However, it will not make the study of strategy a branch of mathematics and logic or even a science or technology. There can be help for judgment but no magical substitutes are likely to appear.

CHAPTER II

PRELIMINARY DISCUSSION OF ALTERNATIVE CENTRAL WAR STRATEGIES[1]

Introduction

Military policy for a country in the situation of the United States today covers a wide range of subjects, including: COIN operations, MAAG activities, various alliance obligations and activities, such as SEATO, CENTO, NATO, etc., and finally the development, procurement and operation of a variety of general-purpose and central-war forces with their supporting activities. This report concentrates on the choice of central war policies--as a context, complement, and element of military and political policy as much as an activity in its own right. In this and later chapters we will especially concentrate on how various policies and preparations could affect behavior and capabilities in crisis and escalation situations.

It is convenient to start with some issues of the immediate past. Let us consider two widely held positions in their extreme (and therefore simplest) forms.

The first, which was probably held most firmly by some Air Force officers but which was also, in some sense, the declaratory policy of the U.S. government, was a (declaratory) military-political policy which emphasized a threat to attack the Soviet Union with a counterforce-countervalue "spasm" attack[2] if the Soviets committed any of a number of provocative acts, mostly involving invasions of Europe. In effect, if a war occurred, all the buttons that were available were to be pressed in the very first few minutes. The major purpose of the troops in Europe was to increase the credibility of our declaration that we would push the button. There was beginning to be some attention paid to COIN (counterinsurgency) and internal war problems and a doctrine and supporting postures for limited, conventional and tactical atomic warfare were built up (albeit very unevenly). In Asia and the Middle East the use of nuclear weapons was usually visualized as being one-sided--only one side used nuclear weapons. In Europe the use was admittedly two-sided

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[1] An early version of this chapter was prepared as a discussion paper for a meeting of the Chicago Conference on Public Affairs,

[2] This jargon-laden phrase introduces three modifiers of the word "attack": (1) counterforce--attempt to degrade or destroy the enemy's offensive capability; (2) countervalue--attempt to destroy or damage things which the enemy values--usually people or property; (3) spasm-- implies that the first attack is total and in a certain sense a reflex rather than a controlled action, i.e., a function of the central nervous system, but not of the brain.

but since the major importance of the operations in Europe was as a
prelude and trigger for the all-out (spasm) war, it was thought that
any level of war was deterred.

The other extreme position was especially fashionable among intel-
lectual civilians (and some officers) in OSD and the Executive Office.
It could be called the pure Finite Deterrence position--the belief that
the only purpose of the strategic forces is to deter major attack on
the U.S. or its forces by threat of an assured countervalue (again spasm
attack) "second strike" capability. It was often held that the best way
to do this was to have a reasonable number of missiles (say something
between 10 and 1,000) based and operated so as to be almost invulnerable
to enemy attack and themselves targeted solely against Soviet industrial
and population targets. If the Soviet Union struck the U.S. or its
major forces, all of these missiles were to be launched by a simple
"go" order at countervalue targets. This attack would presumably so
punish the Soviets that they would be sorry they had attacked the U.S.;
they would note this ahead of time, and not attack. The rest of the
U.S. military problems were to be handled by conventional (or nuclear)
limited war or "controlled war"[3] forces.

This Finite Deterrence position has many things in its favor.
First of all, the word "finite" implies that only a finite force is
required (because there is only a finite target system) and thus as
long as one's forces can survive a potential attack (perhaps by being
mobile, hidden, or very hard) there is no need to match enemy offensive
forces even if they are increased. This tends to slow down the arms
race, or at least that is the hope.

Finite Deterrence seems compatible with all kinds of measures for
arms control, and also is compatible with the Soviet desire to prevent
inspection of their country. (One cannot hide large cities and indus-
tries.) In particular Finite Deterrence is compatible with "parity,"
nuclear stalemates, a "no first use of nuclear weapons" doctrine, a "no
first strike" doctrine, and other attempts to achieve certain limits and
stability. And to the extent that one viewed the situation as a kind of
a spiraling arms race trap in which the Americans and the Soviets were
involuntarily caught, this was a way to get out of it. Indeed, the po-
sition is obviously nonaggressive and defensive and (if combined with the

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3A "controlled war" doctrine is any doctrine in which an attempt is
made to control the strategic forces so that the attack is never, or
almost never, automatic (under the control of the "central nervous system"),
but is under the control of the highest (usually civilian) authorities
and conducted with care and attention to the national interest as calcu-
lated or recalculated at that moment. The current "controlled response"
doctrine is a specific kind of controlled war doctrine emphasizing the
pause strategy (see note on bottom of page 24) in Europe and a "no cities
except in reprisal" central war. There is a connotation of "restraint,"
"bargaining," and "moderation." See H. Kahn, On Thermonuclear War,
Princeton, N. J., Princeton University Press, 1960, esp. pp. 174-5, 288-
305; and Klaus Knorr and Thornton Read (eds.), Limited Strategic War,
New York, Praeger, 1962.

advocacy of a conventional war capability) seems to abolish the use of nuclear force. This last hope had a special appeal for many intellectuals and men of good will. Indeed in principle if the spirit of Finite Deterrence had been adopted by all nations it might have led eventually to some kind of "agonistic" war[4] doctrine in which nuclear war was socially and psychologically unthinkable (but still technically possible).

Those who advocated pure Finite Deterrence tended to ignore or deemphasize the postwar history in which U.S. strategic arms had been procured in the early 1950's less for the direct defense of the U.S. than for the defense of Europe and Asia at a time when the Soviets seemed to be threatening these two areas. To the extent that Finite Deterrence theory worried about these two areas, it relegated their defense to limited war forces, either nuclear or nonnuclear. In fact, however, in spite of its emphasis on arms control purposes, one of the great objections to the position was that it promised to accelerate the spread of nuclear weapons, since the European nations would no longer have an American strategic nuclear guarantee and would be faced with becoming a battleground--either conventional or nuclear. It also seemed clear that the same problem would eventually arise in Asia.

The extreme Finite Deterrence advocates did seem to have at least one other logical inconsistency. Most of them were against active and passive defense of population as "destabilizing" because it reduced the amount of terror in the balance of terror, but they did not object to reducing the number of missiles on a side (in a hypothetical arms control agreement) from say 200 to 50. In principle at least, each side could have 200 missiles with an active and passive defense just effective enough that for practical purposes the balance of terror would be equivalent to having 50 missiles on a side and no defense. As is discussed later (in considering the Arms Control Through Defense Strategy), the two situations are not likely to be equivalent for all considerations, but in most situations the former posture (200 missiles with defense) is probably preferable to the naked 50. Probably one of the main reasons for the failure even to notice this possibility was that the first position requires a relatively serious and sophisticated analysis of various ways in which the arms control agreement could break down, i.e., it is not compatible with a "war is unthinkable" philosophy. More important the technological process of obtaining an offense-defense balance, would involve the extension of defense programs to such new areas as civil defense and anti-ballistic missile defense and so seemed likely to accelerate the arms race in ways the simple missile balance did not.

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[4]War conducted according to rules because of custom, religious injunctions, morality, feelings of fair play or other noninstrumental reasons. Agonistic war differs from the usual limited war in that the limits are not consciously prudential or expedient, but absolute, i.e., they do not depend on fear of reprisal, limited objectives, etc., but are unconditional rules of conduct (that may however have evolved out of some system bargaining process--see pages 263 to 265).

Currently (in the early 1960's) the debate is, to a significant degree,[5] among three positions which might be characterized as:

1. Mostly Finite Deterrence (MFD)

2. Deterrence Plus Insurance (DI)

3. Not Incredible Counterforce First Strike (NCF)

These policies may be defined briefly as follows. The MFD policy is much like the Finite Deterrence described above, but it also tries to protect people from being unnecessary bonus targets, if the enemy should choose to avoid cities and attack only U.S. military bases. That is, if deterrence fails, then to the extent that the Soviets do not wish to kill American citizens or destroy American property, the U.S. should implement measures which make it feasible for the Soviets to make such distinctions, but the MFD policy does not make any serious attempt to remove a large number of U.S. hostages; 50 to 100 million people are to be left concentrated in relatively soft shelters located in the major cities without serious active defense to protect them from missiles or bombs deliberately aimed at them.

Advocates of the MFD policy do not try to protect such U.S. hostages from potentially "malevolent" enemies because of arms race, feasibility, cost, or "image" considerations. They fear such an attempt might touch off an enemy reaction that either negates the program or leads to a spiraling arms race, or they feel that in the modern era of thermonuclear weapons and ballistic missiles it is not possible to protect people, or because they are not willing to see resources--often intellectual, social, or political as well as physical--diverted to this purpose, or finally they feel that any such attempts will give rise to either the reality or appearance of having aggressive or warlike stance and policy, or more usually some combination of these four concerns motivates the choice of an MFD policy.

MFD is thus a very nonaggressive policy, closely related to the Finite Deterrence policy just discussed. The major innovation of current advocates of an MFD policy, in addition to vigorous programs to protect people from being collateral targets, is the doctrine or strategy of "controlled response"[6] in which one has no intention of automatically pressing all the buttons and launching our forces at Soviet cities, but instead uses our offensive capability in a very measured way, at the same time bargaining to reduce Soviet threats, and threatening the Soviets with appropriate reprisals if they kill American

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[5]We will suggest later that two other positions characterized by the titles, Expanded Insurance (EI) and Arms Control Through Defense (ACD) should also be taken seriously in the debate.

[6]See note on bottom of page 14.

civilians or injure American property unnecessarily. This form of con-
trolled response doctrine is also in some degree part of the other two
strategies.

The MFD policy is also willing to have some degree of active and
passive defense, but the major and obvious purpose of this defense is
to protect civilians from collateral or accidental damage, rather than
to protect them from active attempts by the enemy to destroy them.

The DI policy is much more concerned than MFD with the possibility
that war can happen and with the necessity for being able to alleviate
the consequences of war if it occurs. It, therefore, not only intends
to try to survive that war, it intends to get as favorable a military
and political result as is possible. It has much more active and pas-
sive defense of the population, so that even if the Soviets attempt to
kill Americans at some point in the course of war, substantial resources
(which may not be available at that point of the war) will be required.
It also contains more and better offensive forces, both to destroy
Soviet offensive forces (if appropriate or feasible) and to threaten
the Soviets so that intra-war deterrence (controlled response) is more
likely to work.

In the last policy, "not incredible counterforce first strike"
(NCF), each term is important. The "not incredible" refers to the fact
that advocates intend to use the strategic forces as part of an explicit
guarantee or extended deterrence policy. Therefore there must be suf-
ficient credibility that the U.S. can be provoked into using these forces
for what is a "first strike" as far as the strategic forces are concerned,
but is a second (or later) strike as far as major attacks (e.g., conven-
tional invasion of NATO or Japanese territory) are concerned. Presumably
the credibility is measured by the actual deterrent effect on the Soviets
or the Chinese, by the assurance it provides our allies, and by the
assurance of our own diplomats in and out of conferences. The double
negative in "not incredible" implies that even a low level of credibility
will suffice for all of the above. The announced use of "counterforce"
operations (combined, as explained below, with intra-war deterrence and
a controlled response doctrine and limited objectives) is one of the
ways of increasing both the credibility and actual utility of the posture.

NCF, of course, is but one of many possible Extended Deterrence
policies. In such policies one attempts to use strategic threats to
deter much more than direct attacks on the United States or its major
forces. In trying to estimate the credibility of such threats one must
have a scenario in which to evaluate or judge credibility. The following
table indicates four typical scenarios which are usually considered,
though there are others of interest.

TABLE I

Scoring Situations for an Extended Deterrence "Posture"

OPPONENT	SCENARIO	MINIMUM U.S. OBJECTIVE (IF DETERRENCE FAILS)
SOVIET UNION	S.U. CONVENTIONAL ATTACK ON EUROPE	TO HELP HOLD OR FORCE BACK S.U.
SOVIET UNION	"NUCLEAR BLACKMAIL"	LIMIT IMPACT OF PROBES TEACH S.U. A LESSON RESTORE CONFIDENCE
CHINA	ATTACK ON FORMOSA (JAPAN?)	WIN THE PEACE
CHINA	"NUCLEAR BLACKMAIL"	SAME AS WITH S.U. PLUS WIN PEACE

In the first column we have the opponent who is being deterred; in the second column, the action which is being deterred and in the third column the minimum U.S. objective if deterrence fails. It is important to consider these minimum U.S. objectives because they may determine or influence the tactics to be chosen which, in turn, may affect the consequences of U.S. intervention. Expectations about these consequences will in turn greatly affect credibility.

For example, if one is going to annihilate the Soviet Union in reprisal for its attacking Europe then we can, of course, expect the Soviet Union to exert a maximum effort to punish the United States and the Europeans. If, however, one has a very limited objective, as indicated in the table, simply to help hold or force back the Soviet Union, then one is talking about compromises and peace treaties rather than annihilation and unconditional surrender, and one tends to use the forces in a controlled fashion. Thus one can hope to terminate the war with large forces still unused on both sides. These questions of credibility and its relationship to war termination, and the subject of war termination itself, are discussed in later chapters.

The term Nuclear Blackmail in the above tables is in quotes to distinguish it from simple verbal threats that are not taken seriously

(Khrushchev has indulged in these a great deal). By "blackmail" we mean
here the actual demonstration or use of nuclear weapons in an aggressive
or offensive way so as actually to coerce a nation into doing something
it desperately does not wish to do. To date the Soviets have not tried
to do this. The Minimum U.S. Objectives as indicated in the above table
would then be to limit the impact of probes and to the extent the U.S.
was unsuccessful to teach the Soviet Union a lesson, i.e., to punish them
enough so that they would not feel that the precedent was worth repeating.
This would have to be done in a public enough fashion to restore confi-
dence among allies and neutrals.

Vis-à-vis China the problem is much different than vis-à-vis the
Soviet Union. In the next decade or two it should not be technically dif-
ficult to eliminate Chinese strategic forces by a U.S. first strike. The
major difficulties will arise with the term "Win the Peace." It must be
realized that after a U.S.-Chinese war the United States will have to
live in a world environment not necessarily too dissimilar from the pre-
war situation, i.e., the Soviet Union will exist, probably ready to ex-
ploit anti-U.S. feelings; there will be European powers which must not
be gravely antagonized, and the other nations, particularly the under-
developed ones, will also react in various ways to the manner in which
the U.S. conducted the war. Therefore the war should be fought in such
a fashion so as not to complicate inordinately U.S. postwar political and
military problems. Probably the most important requirement is not to
kill an excessive number of Chinese. Take, for example, an extreme case--
the Chinese attack Japan and in retaliation we disarm the Chinese but kill
300 million civilians in the process. Even though the subsequent Chinese
government surrendered totally to the United States and signed the exact
peace treaty we desired, we have probably, in some real sense, lost that
war. Our relationships with the Europeans, with the Soviets, with the
other underdeveloped nations (to whom we have shown that we will have a
total disregard of human life if we ever get involved in a war with one
of them) and even with our own citizens will be such that to the extent
that the U.S. tries to continue to justify its conduct of the war (with
its appalling and _seemingly_ unnecessary one-sided slaughter) we will find
ourselves in enormous moral and political difficulties. These issues will
be discussed elsewhere. In this report we will concentrate on U.S.-
Soviet confrontations and our framework will mostly be designed for this
problem, though we indicate in Chapters VII, VIII, and IX, some of the
ways in which our position might have to be changed if we considered
these wider problems in more detail and in better focus.

As can be seen from Table I, the NCF strategy attempts to continue
the U.S. policy of the last decade and a half, that is, to use U.S. stra-
tegic forces in direct support of our foreign policy. It embodies a
policy of U.S. strategic guarantees protecting the Europeans from Soviet
invasion, and possibly also the Japanese and some others. It attempts
to deter the Soviets from using "credible atomic blackmail." It intends
to provide the U.S. with "escalation dominance" in crises (see pages 294-
296) so that we don't have excessively strong incentives to back down.
It also tries to contain just enough of a first-strike threat so that
the Soviets cannot risk procuring extremely large, vulnerable, unalert

first-strike forces. (See Alpha-1 scenario on pages 140-142 in Chapter VI.)
And finally, it contains enough capability so that if the Soviet Union
or some other nation embarked on an aggressive and immoral adventure,
perhaps involving large-scale nuclear blackmail, and if the aggressive
nation also seemed likely to continue its aberrant behavior so that it
would become dangerous or impossible for the world or even the U.S. to
try to co-exist with it, then the NCF policy would enable us to go to
thermonuclear war if necessary to remove that nation's government. The
prototype for this situation is, of course, Hitler. (See discussion of
preventive (just) war on pages 255 to 262 in Chapter X.)

Very briefly, the MFD and DI policies make very similar foreign
policy use of their major central war forces (restricted to the "passive"
deterrence of major attacks on U.S. and its forces) but procure impor-
tantly different force postures, while the DI and NCF policies have very
similar (war-fighting) postures but make very different foreign policy
uses of these postures.

In all of the above policies, there would be either strong reliance
on (or a willingness to exploit) a strategy of "controlled response" or
other kind of controlled war tactics in a way which furthers national
policy, such as the use of "graduated" attacks for reprisal, punishing,
fining, or bargaining purposes. A typical example of this would be an
attempt to extend deterrence to the intra-war period by a "no cities
except in reprisal" doctrine. For another (extreme) example, consider
the following possible U.S. reaction to a forcible takeover of Berlin:
one might imagine the U.S. destroying two or three gaseous diffusion
plants in the Soviet Union. While these are comparatively nonemotional
targets, in terms of public opinion they are very valuable objects (some
billions of dollars) of considerable long-range (100-1000 days) military
significance and thus the Soviet Union would feel great pain at losing
them. They might feel that there was enough credibility that the U.S.
would do this so that even if there were no other defense of Berlin,
they would still be deterred from taking over Berlin by fear of this
punishment (and possible further escalation). This kind of technique
has already been employed by Khrushchev, as when he announced that he
had already given Malinowski orders to destroy any base from which U-2
planes took off to fly over the Soviet Union. We will call this con-
trolled use of strategic weapons an exemplary or reprisal tactic. Many
analysts who advocate MFD or DI strategies believe that various forms of
exemplary use (going even to relatively lengthy controlled reciprocal
reprisals) are sufficiently credible and deterring so that we do not
need other strategic options--aside, of course, from an all-out retalia-
tory spasm if the U.S. itself is struck a major blow. Others believe
that no matter how many options we need, we need some degree of capability

on almost all the "rungs" of an "escalation ladder"[7] such as the example given on the next page. There will be more discussion of all of these points in Chapters VIII, IX, and XI.

Another reason for softening the starkness of having only a simple central war tactic--an all-out spasm war is that, after all, deterrence can still fail. For example, as President Kennedy said,[8]

> the history of this planet, and particularly the history of the twentieth century, is sufficient to remind us of the possibilities of an irrational attack a miscalculation, an accidental war, or a war of escalation in which the stakes by each side gradually increase to the point of maximum danger which cannot be either foreseen or deterred.

One prefers terminating such a war before total devastation has occurred. The controlled response doctrine, by giving the opponent strong incentives to be restrained, by requiring for the centralized command sufficient flexibility, and by allowing for communications between the two opponents, makes the systems much less accident-prone, and if accidental or other wars occur, they are much less likely to be totally destructive.

Advocates of NCF usually base their position partly on the current political and strategic situation, and partly on the hope that something like the current strategic situation can be continued, at least to some degree. They will generally emphasize that NCF is not a new policy, but a continuation of current policies while the competing MFD and DI policies actually represent a break with the military policies of the last decade. They feel that it is important to emphasize this distinction because usually the debate is cast in exactly opposite terms, and indeed many analysts have anticipated (perhaps over-anticipated) the probable future, and think of MFD as _being_ current U.S. policy, and the attempt to get NCF as being a radical (right-wing advocated) change. In justice to the NCF advocates one must agree with them that this is not so.[9] NCF or stronger has been the policy since about 1950, and probably will be to 1965, or possibly even later if political, technological, and economic trends

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[7] Escalation ladders, a typical example being shown on the next page, are useful metaphors for analyzing the possible uses of violence and coercion in the next decade or two. The one shown on the next page is (mostly) from Herman Kahn, "Escalation and Its Strategic Context," HI-241-P, in National Security: Political, Military and Economic Strategies in the Decade Ahead (New York: Praeger, 1963). Many analysts now believe that the important problems are likely to involve other rungs of the ladder than 23 (Local Nuclear War--Military), and 41 to 43 (various kinds of ultra-destructive all-out wars), the three which are usually studied.

[8] Special Message to the Congress on Urgent National Needs, May 25, 1961.

[9] Of course, if we have to double the budget or build blast shelters or something similar in order to preserve the policy, one might justifiably think of this as a radical innovation.

FIGURE I

AN ESCALATION LADDER

A Generalized (or Abstract) Scenario

(No Nuclear Use Threshold)

	*20.	"Peaceful" World-Wide Embargo or Blockade
	19.	"Justifiable" Counterforce Attack
	18.	Spectacular Show or Demonstration of Force
	17.	Limited Evacuation (~20%)
	16.	Nuclear "Ultimatums"
Intense Crises	15.	Barely Nuclear War
	14.	Declaration of Limited Conventional War
	*13.	Compound Counter-Escalation
	12.	Large Conventional War (or Actions)
	11.	Super-Ready Status
	*10.	Provocative Breaking Off of Diplomatic Relations

(Nuclear War Is Unthinkable Threshold)

	9.	Dramatic Military Confrontations
	8.	Harassing Acts of Violence
Traditional	7.	"Legal" Harassment
Crises	6.	Significant Mobilization
	5.	Show of Force
	4.	Hardening of Positions--Confrontation of Wills

(Don't Rock the Boat Threshold)

Subcrisis	3.	Congressional Resolution or Solemn Declaration
Maneuvering	2.	Political, Economic, and Diplomatic Gestures
	1.	Ostensible Crisis

_____ Disagreement--Cold War _____

*These options are not discussed in "Escalation and its Strategic Context".

FIGURE I cont'd

_____ Aftermaths _____

Civilian Central
Wars
{
44. Some Other Kind of General War
43. Spasm War
42. Civilian Devastation Attack
*41. Augmented Disarming Attack
40. Countervalue Salvo
39. Slow Motion Countercity War
}

(City Destruction Threshold)

Military Central
Wars
{
*38. Unmodified Counterforce Attack
37. Counterforce-with-Avoidance Attack
36. Constrained Disarming Attack
35. Constrained Force Reduction Salvo
34. Slow Motion Counterforce War
*33. Slow Motion Counter-"property" War
32. Formal Declaration of "General" War
}

(Central War Threshold)

Twilight Zone
Hostilities
{
31. Reciprocal Reprisals
30. Complete Evacuation (~95%)
29. Exemplary Attacks on Population
28. Exemplary Attacks Against Property
27. Exemplary Attack on Military
26. Demonstration Attack on Zone of Interior
}

(Central Sanctuary Threshold)

Bizarre Crises
{
25. Evacuation (~70%)
24. Unusual, Provocative, and Significant
    Countermeasures
23. Local Nuclear War--Military
22. Declaration of Limited Nuclear War
21. Local Nuclear War--Exemplary
}

(No Nuclear Use Threshold)

continue on their current course or become more favorable to NCF. (Of course no statement about the specifics of almost any nation's policy can be completely correct even conceptually, especially with respect to hypothetical questions. Thus the previous statement is to some degree ambiguous as well as controversial.)

In a way, NCF tries to carry into the nuclear era a traditional view of warfare: when the interests of a great state or of its essential alliance partners are being menaced, the "proper" reaction, if the other side continues its menacing actions, is to declare war, and to attempt to win the war. "Win" does not mean unconditional surrender or total devastation for the other side, but merely putting the other side into such a disadvantageous position that it becomes willing to sign a reasonably satisfactory (to the victor) peace treaty rather than continue to wage the war. In this traditional (but not American) view it is expected and assumed that there will be both bargaining and coercion as well as destruction and death and the usual outcome of the war will not be the extremes of total victory or unconditional surrender but some intermediate outcome. We discuss these issues at some length in Chapter VIII.

A DI policy tries to deter nuclear attack on the U.S. (and possibly major nuclear attack on NATO) but also devotes substantial efforts to providing insurance if deterrence fails (i.e., it places less reliance than MFD does on the willingness of the enemy to observe a "no city" convention and also improves the intra-war deterrent threat to make the observance more likely). If one restricts the deterrence to continental U.S. and its major forces, then DI is politically much like MFD, but with more emphasis on active and passive defense of population, plus a better and more flexible counterforce capability because the insurance requirement--i.e., if deterrence fails--is considered more important. If one includes deterring major nuclear attack against NATO or Japan under the DI strategic umbrella (as in the Contingent Homicide Strategy to be discussed), then all the above comments do not hold completely, and the policy is somewhat more like NCF except for the contingency of a ground invasion of NATO. The DI policy presumably envisages handling conventional ground invasions conventionally, or at most with tactical nuclear weapons, while one current form of NCF, as in the strategy of the "pause,"[10] handles the ground invasion only for a time on its own terms, using the pause to bargain, exert pressure of various kinds and to give ultimatums.

To summarize the above very briefly, three major current (controlled response) Central War choices are:

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[10] In the current strategy of the pause it is asserted that the NATO would react against a conventional ground attack conventionally for a time (say two weeks to two months), using this conventional pause to bargain and threaten. However, before accepting defeat in the ground war we would launch SAC at the Soviet Union if no other means of preventing it existed. See Max Singer, The Role of Nuclear Capability in the Defense of Europe and the Strategy of the Pause, HI-114-P, Hudson Institute, August 3, 1962.

Mostly Finite Deterrence (MFD): no attempt to deny "adequate" hostages, but prevent "unnecessary" collateral damage--desired because of feasibility, cost, image, or arms control considerations.

Deterrence Plus Insurance (DI): war can happen--need better deterrence (preattack to prevent crisis escalation and postattack to increase likelihood of control)--also need ability to survive and perhaps to win as a hedge against deterrence failing--however no explicit attempt to get any "offensive" foreign policy benefits from possession of these "war-fighting" forces (i.e., no first strike threats).

Not Incredible Counterforce First Strike (NCF): the weakest of the extended deterrence strategies--attempts to continue, to some significant degree, the current system of explicit and implicit strategic guarantees throughout the Decade--tries to maintain escalation dominance--also maintains some degree of preventive (just) war potential.

However, as already discussed (on page 18), the three categories described are neither absolute or objective. They not only depend on the postures of each side, but on how one thinks about these postures, on such psychological qualities as resolve, courage, determination, and caution, and on the starkness and unpleasantness of the alternatives which are being presented by the other side or by the situation. It should also be clear that we might have an MFD policy vis-à-vis the Soviet Union and an NCF vis-à-vis the Chinese People's Republic.

All of the above policies--MFD, DI, or NCF--pay significant but varying degrees of attention to limiting the consequences of wars caused by minor incidents, accident, miscalculation, unauthorized behavior, etc. Current U.S. policy, one rather suspects, is between NCF and DI. The biggest gap we have today in implementing either of these policies may be in civil defense; under current programs the strategy seems to be moving rapidly to MFD, though many will argue that there are strong reasons for attempting to slow this movement or to have it move backward in the direction of NCF or DI.

Whether or not a significant degree of DI or any NCF is feasible and desirable and for how long depends on many things. The most important variables are likely to be more political than technological although clearly the technological variables will be very important. This occurs mainly because many questions of technological feasibility or desirability are dominated by the funds and intellectual resources available and the actions and reactions of potential opponents. Within wide but reasonable limits we probably know most of the technological possibilities for the next decade or so, although there will doubtless be some startling and important surprises. Yet we can probably predict them better than the size of the military budget or the speed and efficiency of each side's countermeasure program. To see why the first is true let us note that it seems quite likely that in 1975 the U.S. GNP will be something close to, but less than a trillion dollars. (A trillion dollars per year GNP during fiscal '75 would result from an average growth rate of about 4.5% from the end of 1963.) However even a trillion dollars per year GNP does

not necessarily imply large military budgets. One can easily imagine
if the current state of detente and the current tendency of the Euro-
peans to become independent of the United States persist, there will be
a weakening of NATO ties, possibly a withdrawal of most or all United
States troops from Europe, and a general easing of military pressures.
(See discussion of Alpha and Beta Worlds in Chapter V.) One could then
imagine the U.S. military budget under such circumstances being about
25 billion a year (or about 3% of the likely GNP). However if only one-
fifth or so of this budget were put into strategic central war forces,
one could still maintain--at least for some years--a very respectable
offense force, say between 1,000 (or more) Minuteman type missiles, a
few tens or hundreds of larger missiles of the Titan II class--possibly
ten to thirty wings of B-52's and about 50 Polaris submarines. This is
a very large force, indeed, for a peaceful world, so it is unlikely that
the United States would feel underarmed with this force. On the other
hand, if there were a reversal of current tendencies (see discussion of
Delta and Epsilon Worlds in Chapter V)--if tensions reached levels like
those of 1950, when the North Koreans invaded South Korea and Congress
stopped debating whether the defense budget should be $14, 15, and 16
billion (and whether or not we would be bankrupt at 18) but authorized
an increase from the previous year's $13 to 60 billion. One could imag-
ine us going back to spending about 15% or so of our GNP on military
products as we did during the Korean War; this could be close to 150
billion a year. And, of course, the figures of 3% to 15% do not mark
the potential limits--the swing could go even wider. In other words,
between now and 1975 we may spend on military preparations as little as
a third of a trillion dollars or as much as a trillion dollars, and in
1975 we might be spending less than $25 billion a year or more than $150
billion a year. Corresponding predictions can be made for the Soviet
Union and some of the European countries--and to a somewhat lesser degree
for Japan (in the next few years the Japanese are likely to become the
third largest industrial power, surpassing West Germany). Such countries
as China and India may also be important, though they are not likely to
have as direct an impact--at least by military means, unless aided by a
more advanced power.

We can give some greater concreteness to all of the above and bring
the discussion closer to realistic policy considerations with some con-
crete examples. Let us start by hypothesizing two possible postures
which the United States might have in the early or mid-seventies and
four postures which the Soviet Union might have. For the U.S. the two
possibilities assume, respectively, among other things, a gradual (approx-
imate) halving and doubling or so of the central war budgets a somewhat
smaller but comparable range to that indicated by the 3% to 15% swing we
have just discussed--a range well within possibilities. The six possi-
bilities--two for the United States and four for the Soviets--are listed
on the following page.

U.S.-A (A Possible Early-Mid Seventy MFD Posture)

    10 to 30 (15-plane) wings of B-52's
    6 wings of B-58's
    1000 A, B, and C Minuteman
    100 heavy payload ICBM's (Titan II and III?)
    50 Polaris submarines (with 800 A_1, A_2, and A_3 missiles)
    A retrofitted air defense
    A "symbolic" anti-ballistic missile defense
    250 M fallout shelter spaces
    Blast and thermal protection around SAC bases
    Mobilization base for improvised and crisis protection

U.S.-B (A Possible Early-Mid Seventy DI or NCF Posture)

    10 to 30 (15-plane) wings of RS-52's
    6 wings of RS-58's
    2000 Improved Minuteman
    100 Improved heavy payload ICBM's
    50 Improved Polaris submarines
    An improved air defense
    A light cover of anti-ballistic missile defense
    120 M "dispersed" urban blast shelters (mostly 10-300 psi)
    150 M nonurban shelters (mostly 5-10 psi)
    Adequate shelter survival and support systems
    Mobilization base for improving protection and recuperation
      capability during crises

S.U.-A (A More or Less Predicted Soviet Posture If We Have U.S.-A)

    100 long-range bombers
    500-1000 "ordinary" ICBM's
    100 heavy payload ICBM's
    200 missiles on submarines
    Elaborate but "ineffective" air defense
    Elaborate but "ineffective" anti-missile defense
    Modest civil defense preparations--capability for improvising more

S.U.-B1 (A Possible Reaction to U.S.-B)

    Add 1,000 missiles on submarines to S.U.-A

S.U.-B2 (Another Possible Reaction to U.S.-B)

    Add 1,000 ordinary ICBM's

S.U.-C (A Third--and Very Effective--Reaction to U.S.-B)

    Add 5,000 heavy payload, well-protected ICBM's to S.U.-A

In U.S.-A we assume about the number of missiles currently programmed, the acquisition of a symbolic anti-ballistic missile defense, and some fixing up of the Air Defense system, but otherwise, more or less, the preservation of the current forces (including current officially proposed additions). While U.S.-A is a rather impressive-looking capability as measured by early sixty standards, we conjecture as discussed later that during the seventies it would just about amount to an MFD policy, at least if matched against something like S.U.-A, not to say S.U.-B or S.U.-C.

U.S.-B attempts to preserve NCF or have a good DI into the seventies. It is successful against S.U.-A, unsuccessful against S.U.-C, and ambiguous versus S.U.-B. We will discuss in later chapters how one might describe and analyze the detailed performance of the above postures under various assumptions and conditions, but we might make some preliminary remarks here to illustrate quantitatively the above statements. If both are thought of as mid-seventy postures, the population of the U. S. would then be about 225 million and the population of the Soviet Union would be about 265 million. With U.S.-A even if the U.S. struck a first counterforce blow against S.U.-A the Soviets might, if they retaliated "malevolently" be able to kill something between 100 and 200 million people, depending on such details as are discussed in Chapters IX and X. Against S.U.-B or S.U.-C the upper limits would almost definitely apply. However, the U.S.-A posture is such as to allow the Soviets to avoid collateral damage if they choose to avoid striking at U.S. cities or population. It is, therefore, properly called an MFD posture.

We will make some misleadingly simple remarks and assume for the moment a very oversimplified criterion of performance and say that U.S.-B if it is used in a first strike against S.U.-A could result, if the Soviets retaliated malevolently, in fewer than 20 million dead Americans, possibly much fewer (assuming all the Americans are in shelters) and some serious but probably solvable recuperation problems. If U.S.-B was used in a first strike against either S.U.-B, there might be an additional 5 to 10 million fatalities or so plus much greater jeopardy to the possibility of recuperation. While against S.U.-C even if the U.S. struck first, the Soviets could still inflict as much as 100-200 million fatalities in their retaliating blow.

Thus one might argue that against S.U.-A the U.S.-B posture could be used to support a NCF policy with a certain degree of credibility, and could certainly be used against either S.U.-A or S.U.-B to support a DI posture. But against S.U.-C, even U.S.-B is clearly just MFD; and it could only with difficulty support an NCF policy against either S.U.-B. Furthermore it is almost clear we would worsen our absolute and maybe our relative position by going from U.S.-A to U.S.-B if doing so caused the Soviets to go from S.U.-A to S.U.-C. We would therefore only go from U.S.-A to U.S.-B if we felt that the Soviets would react with S.U.-B or less.

All of these statements and numerical illustrations are subject to all kinds of caveats and elaborations, some of which will be gone into later. It should be noticed, however, that while the postures are chosen

by assumption rather than by analysis or prediction, they are reasonable
illustrations of possibilities and combinations that at least some people
take seriously.

Fifteen Central War Strategies

While we will not, in this report, get into a very detailed descrip-
tion of any strategy, it will be useful to have a somewhat larger set of
packages (aggregated Central War Strategies) to consider than the three
we have just discussed. We list below themes for fifteen possible central
war strategies (or packages). The themes are ordered _roughly_ in terms of
increasing use of central war threats for foreign policy purposes. They
start from a position which emphasizes Pacifistic Deterrence (the notion
that the only purpose of the forces is to preserve the peace with almost
no attention to the possibility of deterrence failing) through an increas-
ing emphasis on the possibility of war actually occurring, switching fin-
ally to an increasing emphasis on the use of central war threats and capa-
bilities as a continuation of politics by other means:

          1.   Minimum Deterrence (MD)
          2.   Finite Deterrence (FD)
          3.   Strategy as Currency (SC)
          4.   Mostly Finite Deterrence (MFD)
          5.   War Stopping (WS)
          6.   Arms Control Through Defense (ACD)
          7.   Deterrence Plus Insurance (DI)
          8.   Expanded Insurance (EI)
          9.   Contingent Homicide (CH)
          10. Limited Strategic Retaliation (LSR)
          11. Not Incredible Counterforce First Strike (NCF)
          12. Contingent Preventive War (CPW)
          13. Credible First Strike (CFS)
          14. Pure Massive Retaliation (PMR)
          15. Not Incredible Massive Retaliation (NMR)

It will become clear from the discussion that the order which we
have given above is to some degree arbitrary; different individuals
would change some of the places; for example, either of the Massive Re-
taliation strategies (PMR or NMR) might be moved down the list as far
as nine by some of their adherents, and Limited Strategic Retaliation
(LSR) could easily be put much lower or much higher on the list. The
names really designate themes for use in designing packages. In all
cases many different detailed strategies could be designed which would
be examples of some basic theme[11] (where for example in the case of Min-
imum Deterrence each specific strategy might be labeled MD-1, MD-2, etc.
and so on for the other themes). In addition it is sometimes desirable
to give almost equal emphasis to several themes, thus creating additional

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[11]See for example Chapter XII and Appendix II.

packages. In particular, the themes SC, LSR, and NMR (Strategy as Cur-
rency, Limited Strategic Retaliation, and Not Incredible Massive Retali-
ation) may combine with other strategies as major co-equal themes. (They
figure as minor themes in almost all of the strategies and only get the
labels SC, LSR, and NMR when the theme dominates other considerations.)

The reader may be appalled at the length of the list. We claim that
it is desirable to have such a lengthy list if we are to do an adequate
job on the first four objectives defined on page 4. In particular we have
included many themes for purely methodological or didactic reasons; e.g.,
only themes MFD, ACD, DI, EI, and NCF are to be taken seriously as possi-
bilities for the United States today.

We will now discuss very briefly some major characteristics a Cen-
tral War Strategy should possess if it is to embody any particular theme.
(The discussion will repeat some material which has already been given.)
In the rest of this report we will be considering broad principles and
then examining these principles in light of each strategy, as contrasted
with Chapter XII and Appendix II which specify the strategy and then con-
sider the broad principles as related to that strategy. In fact, in Ap-
pendix II we will, within our space limits, systematically discuss each
of the above strategies in about as much detail as can be done without
getting into numerical calculations. It is clear that if either tech-
nique is followed systematically, then exactly the same issues and argu-
ments will be covered. Let us now define or amplify each theme in a
somewhat preliminary and oversimplified way. Of course, as we have men-
tioned, we may have a number of different realizations of any particular
strategy which might be identified as MD-1, MD-2, MD-3, and so on. This
notation emphasizes that just because two individuals are in the same
"strategy box" does not mean they are in basic agreement on the issues;
it simply means that they are in enough agreement to agree on the broad
issues that are specified by that strategy box. For them to be lumped
together for some other discussions might possibly create strange or un-
comfortable if not incompatible bedfellows. For other discussions, it
might be essential to separate these artificial categories into separate
groups or even to reclassify them into new categories. There can be a
good deal of variation between the adherents of each strategy.

1) Minimum Deterrence (MD): Emphasis is on procuring the least
central war capability that is consistent with minimum national objec-
tives. Most adherents hold assumptions that indicate this is a very
small amount indeed. Some people have suggested that two protected
missiles--one that could get through to Moscow and another that could
get through to Leningrad--might be a sufficient deterrent force for the
U.S. More commonly about 50 to 100 reasonably well-protected missiles
are suggested. Sometimes people do not worry much about protection,
arguing that as long as the opponent cannot quite be sure that he will
be able to destroy the missiles, the uncertainty will deter him and
therefore even soft and unreliable forces are good enough.

2) <u>Finite Deterrence (FD)</u>: An assured capability to retaliate
with a countervalue spasm attack if the Soviet Union strikes the United
States. It may be combined with a limited use of exemplary attacks as
in LSR in response to other provocations but this possibility is de-
emphasized. The emphasis is often on arms control, economizing on costs
(political, social and moral as well as monetary) infeasibility of doing
much more, the acceptability of the resulting image, and so on. It has
a simplicity and a nonaggressive character which many find very desirable.

3) <u>Strategy as Currency (SC)</u>: Adherents either do not take
seriously the possibility of war occurring or of realistic calculations
influencing events or they do not believe it is feasible to influence the
outcome of either of the above. Their preparations are motivated mainly
by the possibility of political benefits to be gained rather than an
objective capability to deter an opponent, or to wage and survive a war.
These political benefits are often independent of or not much affected
by the objective capabilities as evaluated under realistic circumstances,
i.e., facades are judged as adequate if one can get away with it.
The usual benefits sought are greater cohesion of the alliance, more
influence in the alliance, internal political advantages, prestige, etc.

4) <u>Mostly Finite Deterrence (MFD)</u>: As in FD there is emphasis on
"adequate" retaliatory capability, but the system is also designed so
that there will be no unnecessary collateral damage if the opponent
attacks the U.S. but does not try to kill U.S. civilians. If deterrence
fails, U.S. probably follows a tit-for-tat controlled war strategy,
attempting at all points to call the war off, most likely accepting the
conditions that prevail at the time the war is called off. A less stark
form of Finite Deterrence.

5) <u>War Stopping (WS)</u>: Similar to Mostly Finite Deterrence, except
that it buys such large and protected forces so that if deterrence fails,
the enemy will still not be able to judge, no matter how lucky he has
been, that he can really force a victory. There will, under all conceiv-
able circumstances, be too large a force surviving. The large forces also
ensure against uncertainties in intelligence, technological breakthroughs,
new political-military developments, unexpected weaknesses or weak links,
and so on. One could imagine a WS strategy which involved the procure-
ment of tens of thousands of land and sea missiles, and even hundreds of
bombers but little or no air defense or civil defense because one did
not want the system to look threatening. That is, one makes clear to the
opponent that the offensive weapons are being bought for truly defensive
reasons--to deter war, to survive some kind of tit-for-tat retaliation if
one is attacked in any way, and to terminate, by a simple cease fire, any
war that happens to start. However because one does not wish to exploit
this large force offensively one still maintains a posture in which the
opponent has all the hostages he needs to preserve his peace of mind.

6) <u>Arms Control Through Defense</u> (ACD): A belief that the deliberate
and compulsory use of one's own civilians as hostages, as all five of the
above policies do, in order to further arms control, stability, or other

purposes is basically wrong-headed. Adherents argue that arms control is
both more feasible and more stable if there is some balance between offense
and defense; e.g., they believe that arms control can be made to work if
there is enough active and/or passive defense available to alleviate the
uncertainties and to hedge against disaster, and they also believe that
in an arms control environment with greatly reduced numbers of missiles
available to both sides active and/or passive defense can be made to work.
They may even overemphasize defense at the expense of offense. We believe
this policy is likely to get more and more attention in the near future.

7) <u>Deterrence Plus Insurance (DI)</u>: This takes very seriously the
possibility that deterrence may fail. It argues that one may need more
deterrence than is normally believed because one measures deterrence by
one's ability to withstand strain in an intense crisis. It wants in-
surance in case deterrence fails, i.e., some war-fighting and war-sur-
viving capability. While it depends less on controlled response working
than the Mostly Finite Deterrence policy, it also wishes to have greater
threats available after deterrence has failed in order to make controlled
response more likely.

8) <u>Expanded Insurance (EI)</u>: This policy emphasizes prudential po-
licies like DI except more so. That is, it has even more deterrence be-
cause there is even more emphasis than DI has on coping with intense
crises. EI also wishes to have a capability for initiating what we will
call a Just Preventive War (see page 255ff. for discussion). The extra
capabilities for Type I Deterrence are made evident because one wishes
the deterrence to work. The rest of the war-fighting capability is hidden
as much as possible because one does not wish to advertise the Preventive
War potential. It is simply there in case desperate circumstances require
its use. Therefore, latent, hidden, or unexploited qualities are empha-
sized even if more expensive than obvious and public qualities.

9) <u>Contingent Homicide (CH)</u>: This policy is very similar to the
Finite Deterrence policy except that it specifies a nuclear attack on
Europe or other extremely vital contingency as a <u>casus belli</u>. It makes
up for diminished credibility by increasing the size of the punishment
and likelihood, if there is provocation, that there will be spasm coun-
tervalue retaliation. Under these assumptions, the expected disutility
to the opponent of risking war is supposed to be great enough to make up
for the diminished credibility of such a response actually occurring if
deterrence should fail.

10) <u>Limited Strategic Retaliation (LSR)</u>: This strategy could be
combined with almost any of the physical postures of the other strate-
gies. Its major characteristic is that it emphasizes the use and threat
of restrained countervalue strikes for foreign policy objectives. That
is, the major tools are Exemplary Attacks (attacks which are initiated
for punishment, fining, bargaining or deterrence purposes). There is to-
day great interest in the scholarly community in this possibility,[12] but
it has almost been ignored by Western policy makers.

12Klaus Knorr and Thornton Read, <u>Limited Strategic War</u>, New York:
Praeger, 1962.

11) <u>Not Incredible Counterforce First Strike (NCF)</u>: This is one
of the weakest of the extended deterrence strategies. It attempts to
continue the current system of explicit and implicit strategic guaran-
tees throughout the Decade to some degree. It also tries to maintain
some degree of preventive (just) war potential. Finally and most
important it tries to get and keep central war forces competent enough
to help achieve escalation dominance in a crisis.

12) <u>Contingent Preventive War (CPW)</u>: This strategy tends to re-
quire a great capability so that it will be clear to a potential aggres-
sor or potential opponent that it makes sense for the United States to
initiate a central war in retaliation to certain kinds of extreme
provocation, usually an attack on Europe. In other words, the strategic
balance should be such that it would be in the U.S. national interest,
coldly calculated, to go to war if the Soviets attack Europe (i.e., the
credibility is achieved through warning as opposed to threat).[13]

13) <u>Credible First Strike (CFS)</u>: A strategy which achieves its
credibility partly because it has both greater capability and resolve
than number 11 (NCF) but not quite as much capability as Contingent
Preventive War.

14) <u>Massive Retaliation (MR)</u>: Similar to something between Limited
Strategic Retaliation (LSR) and Contingent Homicide (CH) except that
many more provocations are covered by the Massive Retaliation threat.
This strategy is on the list simply for discussion purposes; it is no
longer taken seriously.

15) <u>Not Incredible Massive Retaliation (NMR)</u>: Again this is one of
those packages which could be combined with a large number of different
physical postures, in fact, any of the physical postures which would go
with almost any of the 14 strategies above except that it needs enough
defense and enough counterforce capability so that the irrationality of
the Massive Retaliation is not so stark. It corresponds to the use of
mixed counterforce and countervalue attacks; it explicitly denies or
makes less likely the possibility of controlled response in order to
improve deterrence.

The reader may now feel more than ever that the fifteen strate-
gies are far too many to be taken seriously and we have suggested that
he may be right. We also suggested that only the five strategies that
are underlined on the list on page 29 will probably be taken seriously
in the Decade. To refresh the reader's mind these are: Mostly Finite
Deterrence (MFD), Arms Control Through Defense (ACD), Deterrence Plus
Insurance (DI), Expanded Insurance (EI), and Not Incredible Counter-
force First Strike (NCF). However, among the theorists on both the
left and the right other strategies are also taken seriously--particu-
larly: Finite Deterrence (FD), Limited Strategic Retaliation (LSR),

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[13]Warning versus threat discussion. See note, page 283.

and Not Incredible Massive Retaliation (NMR). Some (or most) of our current declaratory policies (see pages 250 and 251) seem to indicate that we believe our strategies to be either: Contingent Preventive War (CPW), or Credible First Strike (CFS).

As mentioned earlier, this list of fifteen possibilities is not exhaustive; the order is in no way sacred. People have different judgments about or designs for strategies. These differences would make their ordering, on even the same principle, different from the one shown on page 29. In addition, one can use other variables on which to do the ordering, such as various purposes or objectives, degree or strength of different kinds of deterrence, war-fighting capability, vulnerability, first- or second-strike capability, difference between first- and second-strike capability, size of the force, degree of threat intended, amount of control and calculation intended after deterrence has failed, etc. Thus there are many variables. It is impossible to order all these variables simultaneously on a single one-dimensional continuum. In most cases, however, the number of purposes, the options available, and the capabilities do increase in a more or less correlated fashion. While the correlation is not perfect, for purposes of exposition these degrees of "purpose/capability" are a useful ordering principle and offer a meaningful if slightly misleading discussion. This ordering is given below for fourteen of the fifteen strategies.

ALMOST PURE RATIONALITY-OF-IRRATIONALITY	1. MINIMUM DETERRENCE (MD) 2. FINITE DETERRENCE (FD)	(TYPE I Deterrence Only)
	3. CONTINGENT HOMICIDE (CH)	(A NATO Type I Deterrence Only)
	4. PURE MASSIVE RETALIATION (PMR)	
LESS STARK COMMITTAL	5. MOSTLY FINITE DETERRENCE (MFD) 6. NOT INCREDIBLE MASSIVE RETALIATION (NMR) 7. LIMITED STRATEGIC RETALIATION (LSR)	
WAR SURVIVAL[14]	8. WAR STOPPING DETERRENCE (WS) 9. DETERRENCE PLUS INSURANCE (DI) 10. EXPANDED INSURANCE (EI) 11. ARMS CONTROL THROUGH DEFENSE (ACD)	
"CALCULATED" TYPE II DETERRENCE	12. NOT INCREDIBLE COUNTERFORCE FIRST STRIKE (NCF) 13. CONTINGENT PREVENTIVE WAR (CP) 14. CREDIBLE FIRST STRIKE (CFS)	

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[14] In terms of capabilities some versions of the "WAR SURVIVAL" strategies may have greater capabilities than some versions of the "'CALCULATED' TYPE II DETERRENCE" strategies.

Strategy as Currency (SC) does not appear on the above list, mainly because it could appear almost anywhere on the line.

More will be said about various possible groupings and orderings in Chapters VII through X, but first a word about the ordering above.

Almost Pure Rationality-of-Irrationality: Strategies 1 through 3 (MD, FD, and CH) are Type I Deterrence Only strategies; number 3, Contingent Homicide, includes NATO as an extension of the area for which we maintain such deterrence. These strategies, and 4, use Rationality-of-Irrationality[15] threats to maintain their objectives. The main objective is solely to punish an attacker or aggressor without being much concerned with the attacker's or aggressor's counterthreats or capabilities.

Less Stark Committal: Strategies 5 and 6 (MFD and NMR), by the appearance (or the actual inclusion) of capabilities to fight and terminate a war, ameliorate the extreme Rationality-of-Irrationality aspect of the first category. In this way they at least gloss over the starkness of the implicit irrationality. Whether or not this is sufficient to make the threat credible, it is hoped that it will make it "not-incredible," i.e., the burden of proof is now on the challenger. Unless he feels the threat is incredible he is likely to be deterred in most cases. As usually formulated, the 7th strategy, LSR, deliberately and explicitly exploits the balance of terror to use the threat of exemplary nuclear attacks to deter, and actual attacks to punish or redress a provocation.

War Survival: These strategies (WS, DI, EI, and ACD) place a central emphasis on the awareness or possibility that deterrence may fail, and that it is desirable to be able to survive a war should deterrence fail. Thus they widen the range of threats that the U.S. might have to cope with in many situations and increase the number of options (or responses) which the U.S. might make. These strategies do not, however, attempt to derive any foreign-policy benefits from having this extra capability, except possibly through greater "assurance" (see Chapter XI).

"Calculated" Type II Deterrence: Strategies 12 through 14 (NCF, CP, and CFS) emphasize the necessity for some degree of Type II Deterrence. They also include the capabilities of the previous category possibly in a greater degree, differing mainly in the objectives for which the strategies are to be used.

Our problem is to distinguish the strategies in terms of different values and assumptions, and to discuss each from the point of view of an aggregate of possible rationales that could justify such a policy. We shall develop a profile of each strategy (paying particular attention to MFD, ACD, DI, EI, and NCF) by asking the question: "To a proponent of Central War Strategy $\underline{X}$, how 'relevant,' 'included' or 'desired' is

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[15] These technical terms and the others to be found in the rest of this chapter are likely to be familiar to the reader. If they are not he can 1) guess, 2) find them explained in Appendix I, or 3) wait until they come up in the systematic discussion which follows.

objective or consideration Y? In Chapters VII through X we more or less
consider each Y in turn and let the X vary for each Y. In Chapter XII
and Appendix II we more or less fix each X and let the Y vary, then go
through each X in turn. One objective, several, or all things simul-
taneously, may be thought to be 'included' or relevant, depending on
the assumptions made and the questions asked. What emerges indicates
the extent to which each policy or strategy depends on the assumptions
made. How realistic these assumptions are is one of the questions that
confronts military and political decision-makers.

We will conclude this chapter with a chart of a matrix that indi-
cates how such a discussion might go for the five strategies MFD, ACD,
DE, EI, AND NCF. We are trying to estimate now the likely benefits,
costs, and difficulties over the Decade[16] if we were to make a decision
to select one of them as national policy and then tried to execute that
policy. That is, the entries in the matrix assume that Soviet policies
and forces and other factors not in our control develop during this
period as it now appears to us that they will (after taking into ac-
count our estimate of likely Soviet and other reactions). A real policy
choice would have to be stated in phased terms making provisions for con-
tingent branch points for known uncertainties as well as for unanticipated
changes in the Soviet threat and other factors. A complete policy state-
ment should also consider long-run (20-100 years) goals and predictions.

The reader is also warned that the entries in the matrix are both
superficial and to some degree misleading. It is one of the purposes
of this report to discuss each entry seriously and the interactions of
the entries with each other and with over-all policies and contexts. The
results of this analysis simply cannot be expressed in a small number of
short phrases.

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[16]This is not intended to be rigorously applied. Some weapons might
be included even though they might not be procured until somewhat later.
On the other hand, foreign policy probably should be chosen more with
today's world in mind.

EARLY SEVENTY COMPARISON (SUPERFICIAL) OF FIVE BASIC CENTRAL WAR CHOICES

ACWS / VARIABLE	MFD	ACD	DI	EI	NCF
MILITARY SYSTEMS	SIMPLE	REASONABLE	REASONABLE TO COMPLEX	COMPLEX	COMPLEX
TECHNICAL FEASIBILITY	HIGH	HIGH	MEDIUM TO HIGH	MEDIUM	LOW TO MEDIUM
DOLLAR COST	LOW	MEDIUM TO HIGH	LOW TO HIGH	MEDIUM TO HIGH	MEDIUM TO HIGH
IMMEDIATE EFFECT ON ARMS COMPETITION	SLOWED DOWN	MOSTLY SLOWED DOWN	AMBIVALENT	AMBIVALENT	CONTINUED OR ACCELERATED
LONG RUN EFFECT ON ARMS COMPETITION	DEPENDS	SLOWED DOWN	AMBIVALENT	DEPENDS	DEPENDS
U.S. IMAGE	VERY PEACEFUL	PEACEFUL VIS-À-VIS S.U.	REASONABLY PEACEFUL	BETWEEN DI AND NCF	POTENTIALLY AGGRESSIVE
DOMESTIC POLITICAL FEASIBILITY	"INEVITABLE" IN BETA WORLD	RELATIVELY FEASIBLE	REQUIRES STATES-MANSHIP	REQUIRES HIGH ORDER STATES-MANSHIP	HIGH IF DECISION-MAKERS DESIRE IT
DETERRENCE OF SURPRISE ATTACK	REASONABLY HIGH	REASONABLY HIGH	HIGH	VERY HIGH	HIGH
STABILITY AGAINST "RECIPROCAL FEAR OF SURPRISE ATTACK"	HIGH	HIGH	REASONABLY HIGH	MEDIUM TO HIGH	MEDIUM TO HIGH
ALLIANCE PROBLEMS	U.S.-DOMINATED NATO UNLIKELY	INTERMEDIATE	INTERMEDIATE	INTERMEDIATE	U.S.-DOMINATED NATO POSSIBLE
CAPABILITY AGAINST "HITLERS"	LOW	REASONABLE	MEDIUM	HIGH	MEDIUM TO HIGH
ESCALATION DOMINANCE	LOW	REASONABLE	MEDIUM	MEDIUM TO HIGH	HIGH
AFTER-EFFECTS OF CONTROLLED WAR	LOW DAMAGE (ARMS RACE MORE LIKELY THAN DETENTE)	MINIMUM DAMAGE LIKELY	LARGE RANGE	LESS	LARGE RANGE
AFTER-EFFECTS OF UNCONTROLLED WAR	TOTAL DESTRUCTION	MINIMUM DAMAGE	LIMITED DESTRUCTION	LESS DESTRUCTION	VERY VARIABLE

CHAPTER III

CENTRAL WAR AS A COMPONENT OF BASIC NATIONAL SECURITY POLICY

The Seven Levels of Analysis

It should be clear that in designing or discussing a central war strategy we are considering how to use various kinds of means or capabilities to pursue certain objectives or goals. Before trying to carry through an analysis of how this is to be done it is convenient to structure the means-ends relationship. We start by noting that in almost any hierarchical structure the work of any particular individual in a line job is likely to be characterized as furnishing ends to his subordinates and means to his superior. Thus whether a particular activity is concerned with ends or means is usually a relative question which depends on the perspective and purpose of the questioner.

The words tactics and strategy have the same ambiguous usage. For example, most military officers (and probably NCO's as well) seem to think of the activities of their superiors as being strategy, of their subordinates as being tactics, and their own position as partaking of, or requiring, both tactics and strategy. Thus, as with means and ends, one man's tactics is another man's strategy, and vice versa.

While this is the point of view we will take here, we note that in some contexts the line between tactics and strategy is not completely relative, since a common dividing line between strategy and tactics is at the level of the general commanding a field army or an admiral commanding a fleet. But sometimes it is taken at the Chief of State or Commander in Chief level. At this last point it is often called Grand Strategy. Since we will often be at about this level, we will drop the adjective, "Grand," and refer simply to political-military objectives, i.e. our level of analysis will then be about that of the National Security Council. By and large, things done mainly within the Department of Defense, the Department of State, the Office of Emergency Planning, and other agencies, in implementing NSC and presidential directives, might then be thought of as tactics--we will refer to them typically as Central War Purposes. We will then think of the activities of the services and the unified and specified commands (which might also be thought of as tactics) as supplying central war capabilities to carry out these Central War Purposes. Finally, we will also examine at still another level of analysis how these capabilities are designed (DDR&E's job) and acquired by allocating national resources.

At the same time we will be thinking of the NSC's political-military objectives simply as tactics used in pursuing national goals as set by the President, Congress and the American people. Thus we immediately have at least five levels of analysis which we could somewhat arbitrarily label "goals," "objectives," "purposes," "capabilities," and "resources." Actually, as will be seen in a moment, it is convenient to separate the national goals themselves in three levels so that we will end up--again somewhat arbitrarily--with seven levels of analysis.

There are a number of dichotomies and terms which have similar hier-
hierarchical usage, i.e., they are more or less synonomous in some con-
texts though even in these contexts they may have different connotations.
In the proper contexts we will use these terms more or less interchange-
ably, at least to some degree. These dichotomies are:

                    subordinate.................superior
                    means......................ends
                    tactics....................strategy
                    capabilities...............requirements
                    technical problems.........policy issues
                    specific...................abstract
                    concrete...................general
                    detailed...................aggregated
                    cost.......................effectiveness
                    feasibility................desirability

The nature of the commonality of the first three dichotomies has
just been discussed; the fourth is an obvious analogy. Similarly direc-
tives or debates coming down from above are thought of as involving policy
issues, while information or debates rising from below are thought of as
involving technical problems. Thus information and problems coming from
below tend to be specific, concrete, or detailed rather than involving
general principles, while directives or questions coming from above tend
to be abstract, general, or aggregated and have to be spelled out or in-
terpreted before they can be dealt with. The fact that the cost-effec-
tiveness dichotomy belongs on the same list may not be so obvious, but
actually costs are obtained by looking at a relatively detailed descrip-
tion of a particular deployment and operating mode of a system and then
costing each deployment and mode; while effectiveness looks at how well
these deployments and modes serve useful ends as set by criteria that are
defined by those above in the hierarchy. Similarly it should be clear
that the feasibility-desirability dichotomy also belongs on the list.
Feasibility is often another way of saying cost, (too high a cost means
infeasible) and desirability is often one way of saying that something is
effective in furthering higher objectives (as opposed to another usage in
which to say something is undesirable is to say that its cost is too high
to be desired).

There are often tense debates among professional staffs as to which
is more important, which comes first in the analysis--desirability or
feasibility, effectiveness or cost and so on. Sometimes the debate is
simply parochial, that is, political scientists like to look at desira-
bility or effectiveness first because they are more familiar with these
aspects, while the engineer likes to look at cost or feasibility because
these are his specialties. Each then accuses the other of being unreal-
istic. The political scientist feels that the engineer is simply follow-
ing blindly whatever technology is becoming available, while the technologist
feels that the political scientist is daydreaming or asking for the moon.
While both errors are possible, actually it can be shown that the problem
is unreal. If one does the "optimization" rigorously, there will be
a number of iterations and it does not really make any difference from

which end one starts; though it may make a good deal of difference if the problem is treated very approximately. Typically it is best to start from that end which is simplest from the viewpoint of the analyst involved or which gets one most rapidly into crucial issues.[1]

We will not debate here under what circumstances which approach is more fundamental. However it should be clear that in many situations the existence of a hierarchy of levels of analysis is implicitly understood to exist and that it is a misleading approximation to think of the hierarchy as being composed of only two or three levels. Exactly how many levels one should define or consider in treating such an over-all problem as Central War Strategy is hard to determine objectively. We have found it convenient to define seven levels as follows:

1. Beyond the National Interest: Ideals, objectives, and hopes we hold, beyond our national interests narrowly defined, for various other human communities and for mankind as a whole.

2. The National Interest and Beyond: Enlightened self-interest as an intimate mixture of considerations of the national interest and those which lie beyond the national interest.

3. The National Interest: Measured by the well-being and security (narrowly defined) of the people of the United States.

4. Political-Military Objectives: Political-military strategies and working objectives which attempt to convert the next three levels of analysis (thought of as means) into advancing the above three levels of analysis (thought of as goals).

5. Purposes, Requirements, and Criteria: Central War forces and organizations as specified and characterized by their immediate purposes, requirements and criteria.

6. Postures, Capabilities, and Systems: The Central War posture of each side as determined by specifying the various elements and systems and their respective technical capabilities and weaknesses.

7. Capacities, Resources, and Weaknesses: The basic national capacities and resources on which each side can draw in making up a Central War strategy and the weaknesses which it must alleviate or guard.

The above statements should be almost self-explanatory but it may be useful to elaborate on some of them anyway. The first level covers objectives the U.S. would pursue though it led to consequences to some degree contrary to the national well-being or security of the United States. The second

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[1]Mathematicians will recognize that this is really quite similar to attacking a problem by either the normal method or the adjoint method. The exact solutions are identical but in one case or the other the approximate solutions may turn out to be much simpler.

level covers those things which it is difficult to assign to either the
first or the third level because many individuals argue that it is on one
or the other of these levels. (Typically "altruists" argue that the recom-
mended measure is in the national interest, narrowly defined, while "sel-
fish" chauvinists try to appear as altruistic advocates of basic national
goals.) Thus the second level really does not belong on the list since
if there were less controversy as to the reasons for pursuing the partic-
ular goals assigned to that level, we would then assign it either to Level
One or to Level Three. Level Three is, of course, the national interest
as selfishly or narrowly defined, or alternatively the national interest
narrowly conceived. We will often lump the first three levels together
under the phrase, the national goals.

To some degree, the analysis of the next level is the major thrust
of this report. That is, we are attempting to list and analyze the con-
siderations that come in when one tries to determine political-military
strategies and working objectives and how these should influence the de-
sign, procurement and operation of current strategic forces, and weapon
systems and research and development on future ones. To the extent that
the next three levels are more or less fixed in the short run, we can think
of an alternative central war strategy as mostly involving decisions on
Level Four issues. If we take a longer-term point of view, then we note
that Level Five can also be affected by decisions. And in the still longer-
term point of view, Level Six becomes something to be changed rather than
being used as a fixed input. And, of course, in the very long run all the
levels may be changed by decisions and thus should be treated, to some ex-
tent, as outputs as well as inputs to a study.

It is convenient to have a short statement[2] to identify each level and
we will use the previous titles for that purpose:

       1. Beyond the national interest
       2. The national interest and beyond
       3. The national interest
       4. Political-military objectives
       5. Purposes, requirements, and criteria
       6. Postures, capabilities, and systems
       7. Capacities, resources, and weaknesses.

It is also interesting, and perhaps illuminating, to consider who
in the hierarchy of responsibility is especially concerned with each level.
The following list is suggestive but should not be taken too seriously or
literally:

       1. Humanity, United Nations, ethical and moral advisors.
       2. A mixture of Levels One and Three.
       3. The President, Congress, and various pressure groups and
          electorates.
       4. The National Security Council and associated organizations.
       5. The Secretary of Defense and the Joint Chiefs.

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   [2]An even shorter five-level version would go: 1) Goals, 2) Objectives,
3) Purposes, 4) Capabilities, 5) Resources.

6. The services themselves, the unified and specified commands, and various special departments and agencies of government.
7. Just about everybody.

There is no suggestion in the above list that the particular groups are concerned only with that level. It is quite clear that the President of the United States must, in some sense, have some information about what the lowliest janitor is doing and the lowliest janitor must have some concept of what over-all policy is or neither can do their jobs well. But it is not inaccurate to state that these same individuals' major responsibilities lie at quite different levels. The situation is somewhat confusing when we get to adjacent levels. When they are close, the responsible individuals at each level must understand much of the neighboring level's problems and interactions often jump a level or two. But nevertheless, we believe that reasonably clear-cut distinctions can be made as to the major responsibilities.

It may also be orienting to list the professions from whom experts at any particular level are usually drawn:

1. Moralists, philosophers, theologians, and prophets
2. Mixture of 1 and 3
3. Politicians, statesmen, political scientists, and "interests"
4. "Strategists"[3]
5. Systems analysts[4] and general and staff officers
6. Operations researchers,[4] weapons designers, and professional officers
7. Economists, engineers, social scientists, geographers, etc.

The above linear array, of course, does some violence to some of the more sophisticated details of the organization and the flow of information, decisions, and responsibilities. While there are main flows up and down, there are also major cross links at each level and between levels. There are also many iterative loops which do not fit into the above simple pattern. However in this report we will concentrate on the flow of information about cost, feasibility, technical performance, etc., that goes up and the information about desirability, effectiveness, requirements, etc., and occasionally decisions that come down. It is important to note that decisions can only be occasional. The whole process is much too complicated and complex to allow for much simple-minded decisiveness at the top.

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[3]Actually there is a sort of hiatus here from the professional point of view, which is sometimes filled by a talented amateur. Thus the real practical experts on political-military objectives and tactics, such as Alexander the Great, Caesar, Frederick the Great, Napoleon, Bismarck, Stalin, Hitler, Churchill and other virtuosos of the political use of force or the military use of politics do not belong to a recognized single profession.

[4]The distinction between strategy, systems analysis, and operations research suggested above is a common, but not uniformly accepted, usage.

Even in a totalitarian society coordination and some reasonable degree
of consensus are necessities if there is to be a creative flexibility up
and down the bureaucracy and if flagrant errors are to be avoided.

The Basic National Security Policy Approach

The reader should now have a reasonably clear idea of what the levels
are and how they might function, either for analytic purposes or in
practice, in a bureaucracy. However, before continuing our discussion of
central war policy in terms of these levels, it is useful to digress
briefly for a discussion of the more general subject of BNSP's (Basic
National Security Policies).

It is probably clear that by concentrating so soon on alternative
central war policies and by considering the level of analysis question
only in terms of issues connected with central war policy we have to some
degree distorted our approach to national security issues, which in turn
may result in a distorted approach to central war issues. However, some
distortion seems to be a more or less necessary result of focusing atten-
tion on a manageable sector, and we will try to live with it even though
we will go to some trouble to alleviate the problem. In any case, it is
helpful to consider by way of contrast how a more balanced approach to
the problems of national security might be pursued. Because it is more
balanced it is also a great deal more work, and <u>we have not carried this
other approach far enough along to make it especially useful to DDR&E</u>.
It is useful, however, to summarize some aspects briefly here in order
that the reader may be able to contrast the relatively narrow approach
we are taking in this report with the kind of approach which might be
taken by someone who is still interested in a major way in military prob-
lems but is also trying to do a balanced study of national security prob-
lems generally.

We can divide policy in the national security field, a bit arbitrar-
ily, into five areas as follows:

1. Military Policy
2. Arms Control Policy
3. Foreign Policy
4. Domestic Policy
5. Miscellaneous

We intend in this report to examine ACWS's (Alternative Central War
Strategies) from each of the above points of view. Actually, of course,
each area can be studied as a subject in its own right. If this were
done, we would find that each area could, to some degree, be structured
by means-ends relationships into various levels of analysis. Thus one
could start with the first three levels and discuss those national goals
that are   levant to the area, then go on to objectives (integration be-
tween areas) and purposes (highest departmental level), going on through
as many levels as one cares or needs to define until one gets to some

basic capabilities and systems level (our Level Six) which is more or
less constructed out of the basic capacities and resources available (our
Level Seven). One then looks at the tactics available for using the
various means at each level to achieve their respective ends, and on the
basis of various assumptions, calculates the efficiency and effectiveness
with which each level plays its role in the process of using the basic
capacities and resources of the country to advance national goals.

Thus in designing and evaluating a strategy in any of the other
areas of a BNSP--such as arms control policy, foreign policy, non-central
war, military policy, etc.--it can be helpful to think at various distinct
levels of analysis, just as in thinking about a central war strategy. Of
course, the particular division into the seven levels we use here for con-
sidering Central War strategy may not be the best in other areas, although
we believe that something like seven levels is likely to be a useful tool
in analyzing most of the twenty-seven BNSP areas. However, in principle,
the interactions between areas are so great that the problem must be
viewed as a whole. Yet merely understanding Central War--a subdivision
of Military Policy--requires a creative synthesis of the labors of thou-
sands of people drawn from many professions. It will be much more diffi-
cult to make the same kind of creative synthesis for a BNSP. The chart
on the next page indicates the complexity of the problem. As indicated
in the chart we have divided the five major areas into twenty-seven sub-
areas, each of which requires its own techniques and organizations for
study, evaluation and policy execution. Thus a broad point of view in
the national security field can be reached only by considering objectives,
purposes, capabilities, capacities, tactics and assumptions in each
policy area in relation to each other and in relation to over-all assump-
tions and national goals. To do this, one could start with a preliminary
synthesis[5]--i.e., a tentative over-all BNSP and a preliminary point of
view, and perform the analysis in each area. One then integrates each of
the twenty-seven areas into the BNSP (or set of BNSP's) and with each other.
This gives a better BNSP, which enables a better analysis to be made of
each area and of the interactions and so on. Thus the whole process is
iterative. We have set out in this report to do a paradigm in two common
senses of the term--as a model of how to do an analysis, and as an attempt
to set forth an improvable framework in which to do an analysis. Whether
or not one uses our particular framework, any judgments one makes about
specific issues will still derive their context and validity from some
kind of integration into some kind of BNSP--whether done badly or well,
implicitly or explicitly--which gives them meaning. In particular, the
proponent of any policy should explicitly set forth his relevant assump-
tions and goals. If this is not done and there are differences of opinion,
and the assumptions used are different from those used by another analyst,
even meaningful disagreement is unlikely without further clarification,

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[5]Such as might be furnished by a short description of any of the
BNSP themes on page 47, e.g., the description on page 48 of the Conserva-
tive Internationalist or more likely an expanded version of that descrip-
tion.

TABLE II

A U.S. BASIC NATIONAL SECURITY POLICY SYNTHESIZES:

MAJOR OVER-ALL ASSUMPTIONS AND NATIONAL GOALS (LEVELS 1-3)

	Level 4	Levels 5-7 or ?
And $\begin{cases} \text{Objectives (4)} \\ \text{Purposes (5)} \\ \vdots \\ \text{Capabilities (6)} \\ \text{Capacities (7)} \\ \text{Tactics (4-7)} \\ \text{Assumptions (4-7)} \end{cases}$ in	Military Policy	$\begin{cases} \text{Sublimited War} \\ \text{Local War} \\ \text{European War} \\ \text{Nth Country War} \\ \text{Central War} \end{cases}$
	Arms Control Policy	$\begin{cases} \text{Arms Competition Environment} \\ \text{Specific AC Measures} \\ \text{Comprehensive AC} \end{cases}$
	Foreign Policy	$\begin{cases} \text{International System} \\ \text{Third World Systems} \\ \text{Soviet Union \& Eastern Europe} \\ \text{Western Europe} \\ \text{China, N. Korea, N. Vietnam} \\ \text{Western Hemisphere} \\ \text{Far Eastern Allies} \\ \text{Southeast Asia} \\ \text{South Asia} \\ \text{Middle East \& N. Africa} \\ \text{Sub-Saharan Africa} \end{cases}$
	Domestic Policy (Level 7?)	$\begin{cases} \text{U.S. Traditions \& Characteristics} \\ \text{Political Support} \\ \text{Budget Allocation} \\ \text{Institutional Processes} \end{cases}$
	Miscellaneous	$\begin{cases} \text{Space} \\ \text{Population Explosion} \\ \text{Economic Development} \\ \text{International Trade} \end{cases}$

and debate without such clarification may be fruitless. While we do not
expect to fulfill all of our aspirations for improving such debates, we
hope to have made some degree of contribution. Our work on the descrip-
tion and generation of BNSP's, including the use of some propaedeutic de-
vices, is reported elsewhere[6] and we will content ourselves here with a
brief recapitulation. As with the ACWS's (Alternative Central War Stra-
tegies) we start with some more or less basic themes:

Basic Themes	Variations

INTERVENTIONIST

My Brother's
Keeper
- 1. Crusade for Development
- 2. Neo-Missionary
- 3. Legalistic "Altruist"

Internationalism
- 4. Minimum Deterrent Internationalist
- 5. Wilsonian Democrat
- 6. Conservative Internationalist

Active Promotion of
Democracy
- 7. Liberal Activist
- 8. Aggressive Democrat

Provisional
Catastrophists
- 9. Arms Control
- 10. Social Justice
- 11. Social Order
- 12. National Interest

Active Anti-Communism
- 13. Protracted Conflict & Containment
- 14. Crusade Against Communism

World Leadership
- 15. Liberal "Pax Americana"
- 16. Conservative "Pax Americana"

NEO-ISOLATIONIST

Abstemious
Interventionism
- 17. "Liberal"
- 18. National Interest Pragmatist
- 19. Austere "Altruist"

Neo-Classical
Isolationism
- 20. "Conservative"
- 21. Active Avoidance
- 22. Fortress America
- 23. Indifferent

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[6]The names of the Themes and the Variations are supposed to be evoca-
tive, to make them easy for analysts to remember, but even more than in
an ACWS, one must pay attention to the formal definition in order to see
what is or is not included in a theme. Thumbnail sketches of most of these
prototype BNSP's, and longer versions of three of them, can be found in
Vol. II of HI-285-RR, September 1963, prepared by Hudson Institute under
Contract No. AF 19(628)-1676.

No one of these is a likely candidate for a pure national policy. Actually BNSP's even more than ACWS's will be a blend with some of the elements in opposition either because it is felt that the "tension" is desirable or because a decision has been made to defer decision. It is possible to make a case that U.S. policy today is a judicious mixture of themes 7 and 8, with some of 2, 5, 13 and 15 blended in. Since these BNSP's are synthesized not only from assumptions about objective realities but also from calculations and objectives, it will tend to look more and more like a character profile the more complete it becomes. Therefore the names we have given to the alternative BNSP's are in the form of characterizations of profiles. The following (taken from the ESD report-- see note on bottom of previous page) is a sketch of such a profile, which will illustrate the basic concept:

Conservative Internationalist: This stragegy follows from an influential American political tradition that derives from classical free trade internationalism. It is marked by the cautious pursuit of classic liberal goals, and by the weight it places on the preservation of American ties with Europe. Because its proponents believe that the maintenance of an independent and friendly Europe is vital to American interests, they are strong proponents of NATO and would be willing to employ a nuclear strike first in the defense of Europe if there were no alternative.

This strategy favors free trade, the growth of cooperative international economic arrangements, and discriminating programs of international aid. While its proponents would not consider aid a means merely to achieve specific political objectives, but regard it as having independent merit and a moral justification, they would employ American influence and aid discrimination to discourage nationalization and statist economics abroad.

The Conservative Internationalist is sympathetic to arms control, although he would be unwilling to see it pursued too far without the simultaneous development of an international policing authority. He recognizes that the proper functioning of such a force implies de facto world government, and is willing to accept the consequences for U.S. sovereignty. He is a strong but cautious supporter of the present-day U.N.

Having a number of profiles as listed above is necessary to indicate the range of policy choices actually available, and to set out clearly some of the major issues of the national policy debate. Again the major serious criticism is likely to be too few choices, not too many. In any case the set given is far superior as a tool of analysis than simple left-right or soft-hard continuums.

More on the Levels of Analysis

Let us now consider briefly each of the levels of analysis as it appears to a specialist in the Central War area and as it appears to a specialist in basic national security policy.

Examining Table II (A U.S. BNSP Synthesizes), note that we have assumed that the first three levels of analysis are clearly applicable to all areas of a BNSP. Indeed some aspects of our interests or goals will be more important for other areas of policy than for Central War strategy and vice versa, but generally much of the consideration of the first three levels of analysis would be as relevant to foreign policy or arms control policy as to Central War strategy. This can be verified by a brief examination of the outlines given below for some of the national goals the Central War specialist is interested in, as discussed in Chapter X.

First Level: Beyond the National Interest

(Most Americans' attitude to Central War is somewhat modified by one or more of the following factors not directly reducible to the national interest, and sometimes in apparent conflict with it.)

1. Moral inhibitions about planning, threatening, or using war, violence, or other than legal techniques in pursuit of narrowly-defined self-interest.

2. In addition a feeling that a step towards a peaceful or united world is a step forward, and a step away from it is a step backward.

3. Sense of moral responsibility towards allies and non-allies looking to us (or needing us) for protection.

4. Fellow-feeling for all human beings, whatever regime they may live under.

5. Cultural heritage of honesty, fair play, justice, chivalry, solicitude for children, mercy, and generosity.

6. Religious, Theological, and other moral considerations.

Second Level: The National Interest and Beyond

1. SYSTEM BARGAINING

2. COMMON INTEREST IN SURVIVAL

   No Doomsday Machines
   Restrained Warfare (Instrumental or Agonistic)
   Arms Control
   International Security (World Order)
   No Contamination of World Environment

3. COMMON IDEAS AND IDEALS

   Human Dignity
   Four Freedoms (of Expression, of Religion, from
       Want, from Fear)
   Equality of Opportunity

4. COMMON INTERESTS REQUIRING ACTIVE COOPERATION

   World Health & Nutrition
   Trade Links and Communications
   Transport, Traffic, Travel & Tourism
   International Law, Regulations & Agreements

5. "A DECENT RESPECT TO THE OPINIONS OF MANKIND"

   Peaceful National Image
   Wars Must Appear Defensive or "Just"
   Generosity to Friends, Neighbors & Defeated Foes

Third Level: The National Interest

1. PHYSICAL SECURITY

> Immunity of National Territory to Threat or Seizure
> Safety of United States Citizens at Home & Abroad
> Security of United States Property at Home & Abroad

2. NATIONAL IDEALS (For Ourselves, Sometimes for Others)

> "The Blessings of Liberty to Ourselves & Our Posterity"
> Progress & Efficiency
> Reward for High Level of Effort
> Justice, Manifestly Done

3. THE AMERICAN WAY OF LIFE

> Preservation of U.S. Constitution and Institutions
> Preservation of Law and Order
> Maintaining High Rate of Growth & Expansion
> Preservation of High Living Standard

4. NATIONAL POWER AND INFLUENCE

> Protection & Support for Our Friends and Allies
> Deterrence & Constraint of Our Enemies
> Voting on & Amending Basic Changes in International
>   Relations
> Adequate Representation in New World Systems

5. NATIONAL HONOR & DIGNITY

> Prestige & Reputation
> Internal Loyalty, Support and Self-Respect
> Respect from Allies, Neutrals and Enemies

The outline of the fourth level of analysis as it is to be discussed in Chapter XI is given below. The subjects covered are relatively specialized, as far as the Domestic Policy and Miscellaneous specialties are concerned, but the Arms Control and Foreign Policy specialists have almost the same interest in the subjects covered, though perhaps with different emphases. Thus at this level of analysis there is some separation, but still substantial overlap. (Indeed, considerations like "assurance" or "economic use of resources" would be appropriate for almost any area of policy.)

Fourth Level: Political-Military Objectives

1. Technical Problems

   A. Deterrence and Credibility--use of threats
       and warnings

   B. Escalation Theory

   C. Rationality-of-Irrationality and Committal
       Strategies

   D. Escalation, Controlled War, and War Termination

2. Objectives

   A. "Rational" Use of Levels Five, Six and Seven
       in all the BNSP areas to pursue National
       Goals

   B. Assurance and "Style"

   C. Affect behavior of various potential enemies

       1. For short term
       2. For long term
       3. At lower rungs of Escalation Ladder
       4. At middle rungs of Escalation Ladder
       5. At upper rungs of Escalation Ladder

   D. Affect behavior of others

   E. Responsiveness

Thus it is at this level that much of the integration between the various areas of policy must be explicitly considered. However, when other areas are analyzed at this level the common considerations are likely to be oriented differently and to have different weights. Let us now look at the fifth and sixth levels as they are going to be discussed in Chapters VIII and IX respectively.

In our scheme and with our degree of aggregation we are justified in thinking of the fifth and sixth levels of analysis as specialized: at least these are the classical levels of the professional expert as opposed to the generalist. In general there will probably be one or more--probably at least two--levels of analysis in every area of policy at which the special tools and demands of that area of policy are so defined and organized that the staffs tend to be drawn from various specifically trained professions and specializations.

Fifth Level: Purposes, Requirements, and Criteria for U.S. Central War Forces

1. PRE-ATTACK THREATS (DETERRENCE)

      Second-Strike Retaliation (Type I Deterrence)
      First Strike (Type II Deterrence)
      Graduated (Nuclear) Response $\Big\}$ Escalation Dominance (or Adequacy)
      Inadvertent Eruption

2. PUNISHMENT OR REVENGE

      Spasm (Retaliatory) Countervalue Attack
      Measured (Second-Strike) Attack
      Graduated Attack

3. IMPROVED WAR OUTCOME SITUATIONS

      Range of Situations for 1 and 2 Above
      Preventive War Potential
      Military Solution to Special Situations

4. ARMS CONTROL PURPOSES, REQUIREMENTS AND CRITERIA

      Technical Stability
      War-Fighting Restraints
      Reduced Levels of Arms
      Stability Against Cheating
      Provocation Avoiding and Tension Reducing
      Avoid Occasions for Stimulating Arms Competition

5. FLEXIBILITY

6. OTHER BNSP PURPOSES

Sixth Level: Two-Sided Central War Postures, Capabilities, and Systems

1.   Offensive Weapons Systems
2.   Active Defense Systems (including warning)
3.   Civilian Defense Systems
4.   National Command and Control
5.   Pre-War Intelligence Capabilities
6.   Tactical and Strategic Skill
7.   Adaptability

Finally, what constitutes the seventh level of analysis in the Central War Area is again common to all areas of policy. That is, the basic resources and capacities of the nation are the same for all, although somewhat different aspects will be of greatest importance in various areas of policy (see chart on next page).

Before terminating this summary of the use of levels of analysis, we should comment on how synthesis up and down the levels is performed. The first three levels, the national goals, are more or less given--ultimate ends. One must, of course, examine them for conflicts and one may even impose a partial ordering either by priorities or means-ends dichotomies, but the levels of analysis classification system is here relatively artificial. Similarly, we can think of Level Seven as being a fixed input for most purposes; the common pool of resources from which programs in each of the areas must draw. Of course, to some extent the BNSP policy finally adopted will affect some aspects of this pool, possibly diminishing some basic weaknesses and increasing some basic strengths (or vice versa), but one largely tends to think of Level Seven as relatively fixed, at least in the short run (and for some aspects, in the long run also). To the extent that the resource pool is fixed, one must examine and trade among conflicting uses.

Levels Four, Five and Six attempt to convert these more or less fixed resources into national goals. In doing so they have to have some mode of operating (tactics) and some theory as to why this mode is a good one (assumptions and analysis). Thus when one looks at the system as a whole, it becomes clear that the description of the BNSP or ACWS at Levels Four, Five and Six can be seen as performing three different functions:

1.   Setting objectives and criteria for the lower level. "This is what you are to try to do."

2.   Scoring the activities being done below. "This is how well we judge you have done, (from the data you have supplied us)."

Seventh Level: Each Side's Basic Capacities and Resources for Central War

1. GEOGRAPHIC CHARACTERISTICS

Size of Country
Relative Position to Other Countries
Nature and Distribution of National Assets

2. SOCIAL CHARACTERISTICS

Population Distribution
Societal Cohesion
National Traits
Social & Economic Efficiency
Resource Allocation Process
Social Discipline, Flexibility & Energy

3. NATIONAL RESOURCES

Natural Resources (Fertility, Water, Minerals, etc.)
Manpower & Skills
Industrial & Technological Capacity
Dollars Available

4. ORGANIZATION & SKILLS SPECIALLY RELEVANT TO CENTRAL WAR

Legacy of Systems & Institutions
Doctrine
Current R&D Problems
Adaptability of Programs
Lead Time
Training & Recruitment

- -

3. <u>Reporting</u>[7] to the level above. "This is how well we judge we have done. These are the kinds of tools you have available."

These three aspects, objectives, scoring, reporting, are being done at each level in constantly shifting and interacting patterns.[8] No aspect

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[7]Thus data and conclusions are also a series and not a dichotomy, just like means and ends, and really belong on our list on page 40, e.g., fourteen wings of bombers with a range of 8,000 miles "looks" like data but the specification of range is really the same kind of conclusionary summing up of many variables as is the specification of an ability to strike back, or to deter an opponent. Indeed we might include all three terms in our set of dichotomies as follows: criteria..................objectives

activities.................scoring
reporting (or data).......conclusions

[8]There are at least two other uses for explicated BNSP's or ACWS's. The first and most obvious is as a usable and accurate description of the policy for such purposes as policy setting, policy describing or policy debating. The second purpose is the same as the first except that the use is metaphoric or analogous, rather than a straightforward description (i.e., the Soviets have a performance equivalent to MFD even though they do not think in these terms and had no intention of having MFD).

can be taken literally as the sole way of looking at the policy descrip-
tions; they must be used together subtly and flexibly. But it is very
important to be aware at all times of which aspect is being used or empha-
sized. For example, one might set NCF as a policy objective, but fail to
achieve the desired level of credibility. Then one's opponent may judge
(score) one to be deficient either in capability or resolve, or in some combi-
nation of them, so that "objectively" one had achieved only DI or MFD.

It should now be clearer than ever that the interactions between the
Central War choices and other areas of a BNSP are critical to the consid-
eration of an ACWS. For example, the principal difference between a DI
and an NCF strategy can be in the relation between the Central War policy
and foreign policy. NCF tries to handle more foreign problems with Cen-
tral War forces than does DI (but not necessarily with more forces). This
should to some degree relieve foreign policy and non-central war military
policy of some requirements (for example, the defense of Europe) but it
may also impose some additional strains upon other areas of policy (such
as arms control or the objectives of appearing defensive and peaceful).
Since DI and NCF may have exactly the same Central War posture, these dif-
ferences in the relation between Central War policy and other areas of po-
licy are some of the major defining characteristics of these strategies.

It is common to think of foreign policy in a way that would make all
military policy subordinate: i.e., a means to foreign policy ends. How-
ever, in order to be able to focus on military policy while preserving
the broader context, we use foreign policy in a narrower sense. (As a
matter of fact, our use of the phrase "BNSP" is only slightly broader
than the broad meaning of foreign policy--policy on issues relating to
external challenges.)

Arms control policy is primarily a way of looking at many aspects of
military and foreign policy, though it can and does involve the other areas,
but typically only for such "auxiliary" issues as inspection or negotiating
principles. Almost all arms control questions come up as components of
foreign and military policies. Indeed, for many people the choice of a
Central War strategy is very largely determined by their choice of an
arms control (or arms race) policy.

Summary

A Central War strategy is always to be thought of as only one compo-
nent of a BNSP, and no consideration of a Central War strategy can be com-
plete unless it takes into account the various potential interactions with
other parts of the BNSP. However, it is reasonable to start thinking from
either end of the relationship, and to consider each alternately as the
independent variable.

The Basic National Security Policy System briefly described in this
chapter may also be a useful method of providing a general political con-
text for the decision-maker faced with alternatives in a specific policy

area, of illuminating the range and interrelationships of national policy
problems, and finally, of contributing to the clarity and productiveness
of general policy debate. It tries to contribute to the first two goals
by arranging elements which go into the composition of an over-all national
policy in a manner which helps reveal the interactions between compart-
mentalized areas of policy, the compatibility or incompatibility of goals,
and the effects of the choice of a set of tactics in one area of endeavor
on the pursuit of particular goals or on the freedom of tactical choice in
other areas. Thus it facilitates a more orderly analysis of the effects of
a single policy decision on policy in other areas than is generally possible
without a structured framework. Applied to a full national strategy, it de-
fines the objectives of a national policy for security and international
order, the tactics by which those objectives are to be achieved, and the
assumptions which underlie the belief that those objectives can be achieved
through the employment of those tactics.

Several processes which must take place before a strategy can properly
be evaluated are thus facilitated. Objectives can be cross checked as
above, and areas detected where the strategy works at cross-purposes with
other strategies. The assumptions underlying policy recommendations are
exposed, making it possible to estimate their validity, and thus the
validity of the strategy in the relevant area. Appropriateness of tactics
to stated objectives and to the pertinent facts of the international situ-
ation can be evaluated, and instances where the use of a particular tactic
in one policy area might impede the policy's ability to achieve its goals
in another can be discovered.

With the bones of the strategy thus laid bare, and the issues delin-
eated, it is to be expected that the policy debate can proceed more effi-
ciently. A strategy so analyzed should provide a much more concrete and
comprehensible framework to a decision-maker operating within its context
than has so far been available. The paradigm in this report, in effect,
assumes that all the above has been done, to some degree, and that we are
now improving the analysis or design of the Central War Component of a BNSP
more or less from the viewpoint of the Level Four analyst. Presumably
after this improvement has been carried through and perhaps after similar
improvements have been carried through in the other components, then these
improved components can be made available to those who are analyzing or
designing the BNSP, and they can then perform a creative synthesis and do
their jobs better. Similarly, the improved analysis or design of the Cen-
tral War Strategy could be furnished to analysts, designers, or operators
at Levels Five or Six and they, by using this new context, could improve
their work. While in the real world the iterations are not performed so
mechanically, logically, systematically, or neatly as this suggests. Such
a process is indeed going on and some increased formalization of at least
the scholarly iterations might be very helpful.

Once these packages have been formulated they can be used in at least
five ways:

1. As a reasonable description of an over-all policy for:

   a. Pedagogical and context ⎫
   b. Empirical　　　　　　　 ⎪
   c. Policy setting　　　　　 ⎬ Purposes
   d. Policy considering　　　 ⎪
   e. Over-all decision-making ⎭

2. Metaphorically

3. To set objectives and criteria

4. To score

5. To report

CHAPTER IV

SOME OBJECTIVES FOR THIS KIND OF ANALYSIS

Introduction

In the last two chapters we attempted to provide a statement of the major central war issues and a context for their discussion and evaluation.

The decision-maker in facing these issues is trying to cope imaginatively, through policy decisions, with future situations he can only dimly perceive. Historians are usually reluctant to study the present because it cannot yet be seen in sufficient perspective. The future is, of course, much harder to grasp, since predicting the possibilities depends on our understanding the present and then making some additional leaps. Knowing his own inadequacy and the probable inadequacy of his advisors, the decision-maker or planner must nevertheless make decisions and plans now which will affect deeply the success or failure of those who follow him, and influence those who will see the future differently. Since he can neither plan nor think of everything, he tries to look at a relevant range of probabilities, remembering the importance of examining possibilities which may be relatively unlikely, but which would be especially catastrophic or desirable if they occurred. Indeed, the importance of unlikely events is perhaps the most significant quality of the modern age of technology; to plan prudently means increasingly to extend the boundaries of plausibility.

To predict the future is difficult because at the simplest level, important aspects of the future are not merely unknown; they are unthought of. Even those aspects of the future which are relatively accessible to the imagination--more or less simple projections of present trends--may still be missed because one's view of the future is necessarily conditioned by emotional and intellectual biases. In addition the future is uncertain in a statistical or probabilistic sense. This means there are many possibilities and while one can attempt to pick the "winner" of the "race," unless this winner is overwhelmingly probable one prefers to describe the probability distribution over the potential winners and, of course, one will probably not be able to do as competent a job as a professional handicapper working on horse races or even a competent speculator in the stock or commodity market. Thus the military-political analyst is not only less "skillful," than the handicapper and speculator, he has even less reliable or objective criteria available for use in prediction. Not only have none so far been devised; they are not likely to be. Nevertheless, the military planner cannot evade the problem. Many aspects of weapons systems, command and control systems, and military strategies tend in the common phrase to be "cast in concrete" for years to come; the planner must begin to develop early concepts and doctrine for those systems--both offensive and defensive--which will enable him to meet the challenges which he will face in the decade of the 1970's. Of course, the systems are built as flexibly as possible and designed, in some sense, to muddle through. The problem is that unless the muddling through capability is thoughtfully designed--that is, unless the possibility

of certain challenges and requirements is adequately foreseen--the system
is likely to be, in fact, inflexible. Nor will ordinary standards of care
and prudence suffice for those responsible for these decisions. U.S. po-
litical and military decision-makers not only carry the burden of U.S.
national security but their decisions may greatly affect the future of
the world. Therefore they can and should be held to higher standards of
care and prudence than the ordinary man in ordinary times and are not
likely to be excused responsibility in case of disaster on the grounds
that the outbreak and conditions of war could not easily--or even "reas-
onably"--be foreseen. The problem, however, is not utterly hopeless.
While it may be impossible to predict the future in detail, it is possi-
ble to predict some gross aspects; and even moderate prudence--hedging--
can have spectacularly useful results should the unlikely occur.

To understand general trends, the method of social and political pre-
diction most often found in government and industry is to refer the problem
to one or more "experts." But experts typically do not offer systematic
explanations of the bases of their predictions. Further experience suggests
strongly that they: 1) are immersed in the past details of the situation
being projected; 2) know the details of how similar situations have devel-
oped or are developing; 3) have developed a few useful rules of thumb in
regard to historical processes (although these may not always be clearly
spelled out); and 4) have imaginatively fused these elements of thought
into a picture of the future. In general this is no doubt the most con-
vincing approach to prediction. However, the approach is more adaptable
to smaller events than to world-wide trends; for the grasp of empirical
detail which forms half of the presumptive case for the method is seldom
convincing on a universal scale. There is also the danger that there may
lie beneath the texture of even wise empirical intuition a bias selectively
distorting both the reception of data and the structuring of intuitions.[1]

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[1]There are, however, cases of successful long-term interpretations of
the present world situation through a simple intuition from history and po-
litical geography. In 1777 Silas Deane predicted that the time would come
when Great Britain, the United States and Russia would rule the world. In-
dependently in the 1830's de Toqueville suggested the bipolar division be-
tween the United States and the Soviet Union. In 1918, when Russia looked
weak, Max Weber projected a unipolar world under the United States, with
the hope that we would not have to divide the world with the Soviet Union.
This series of projections was a long time in fulfillment and it may turn
out to last only a few years, but it was a magnificent example of a trend
obvious to those with the knowledge and foresight to appreciate it. Yet
the lack of preciseness as to when and how and under what conditions the
vision would be realized would have made the prediction less than useful
to, for example, planners between the wars. This is, indeed, the danger
of irrelevance which besets even the best general prediction. Of course,
there is a tendency to recall successful predictions (partly because their
success is surprising) and to forget the much larger number of judgments
of well-informed and intelligent men that proved to be wide of the mark.
And there is more than a little truth in the old definition of intuition
as the feeling you have that you are right about something, whether you
are or not.

We discuss, in the next chapter, two related semi-analytical techniques that have supplied useful approaches to the future, the scenario and the war or peace game. In this chapter we discuss somewhat abstractly the kind of assistance and guidance decision-makers should expect and look for from this kind of analysis and discussion.

The major difficulty of course is that we have had no experience with central war. How might it start? How might it be fought? How might it end? How can we raise these questions, so as to help us to avoid war, without by this very process increasing the danger by creating various kinds of doubts? Central War remains a hypothetical possibility, yet one that it is most important to learn more about. To what extent and how can we "study" it? It is important to be aware of just what "research" on the potential future and its military possibilities can and cannot achieve. We have mentioned in Chapter I that there are at least ten reasonable objectives for this kind of analysis. These are:

1.   to stretch the imagination and improve perspective;

2.   to clarify, define, name, expound, and argue the major issues;

3.   to formulate and study many alternative "packages" and contexts;

4.   to clarify current choices--(hedging, contingency planning and compromising);

5.   to create propaedeutic and heuristic methodologies and paradigms;

6.   to identify and understand developing patterns;

7.   to improve learning, communication and intellectual cooperation--(historical examples, scenarios, metaphors, concepts and language);

8.   to furnish specific substantive knowledge, conclusions, recommendations and suggestions;

9.   to broaden and improve the basis for over-all political decision-making; and

10. to increase the likelihood of rapid and appropriate reaction to new patterns and unexpected crises.

We have deferred the discussion of the above objectives until Chapter IV because we felt that it would be most useful to have it after the issues had been formulated to some degree. A good deal of thought has gone into framing and describing this list of objectives. We believe it is useful and productive for the researcher to go through a conscious process of focusing specifically upon what he is trying to achieve. Doing this may simultaneously open up new opportunities and areas for analysis and limit ambitions in others. We also believe that trying to be consciously and intellectually aware of the possible objectives can be an equally healthy exercise for the reader and help him achieve these objectives; therefore this chapter. Let us now consider each of the objectives in turn.

1. Stretch the Imagination and Improve the Perspective

The very process of systematically arranging all the factors that
have or conceivably might have a bearing on the issues being studied makes
demands on the imagination. Making up such lists forces one at least
briefly to make distinctions and examine nuances that are ordinarly over-
looked or disregarded and to give attention and thought to potentially
important situations and influences that would normally be outside the
range of consideration, possibly because they are non-obvious or improb-
able or more likely because of emotional, professional or doctrinaire
biases. The effort of imagination and intellect required to bring a
range of potentially relevant factors into focus is not likely to be
wasted. Even if most of them should never acquire significance for ac-
tion in the real world, some very likely will. Almost invariably some
small but important number of the distinctions and nuances that are missed
the first time around will ultimately become important. In particular,
possibilities that do not seem live options today may become worthy of
serious consideration overnight as a result of new developments. Sur-
prising developments happen often enough that despite intellectual, so-
cial, bureaucratic, and other difficulties, it is worthwhile to spend
even valuable time and resources in preparing for them--at least intellectually.

It is often the borderline cases that contain the interesting appli-
cations or open up new vistas or new fields. Also, alternatives that no
one would choose, either today or tomorrow, may still illustrate impor-
tant principles in a simpler and more persuasive fashion than complex
examples taken from reality. To be fully aware of the shape of reality
it is necessary to glance beyond its boundaries on all sides. Proper
perspective requires a view of the setting. Perhaps most important, our
intuitions are no longer as reliable a guide as they used to be. Many
currently useful ideas seemed bizarre or ridiculous when they were first
considered. The seemingly improbable or hypothetical may, on analysis, be
judged to have been unfashionable or novel rather than unlikely or un-
realistic.   Thus research that opens the eye to fine distinctions and
nuances is essential training and education for the analyst. For this
reason alone such research should not shy away from examining extreme,
implausible, or unfamiliar situations.

Is there a danger of bringing too much imagination to these problems?
Do we risk losing ourselves in a maze of bizarre improbabilities? If we
review past performance in this field we find comparatively little evidence
of harm through excessive concern with the unfashionably hypothetical.
There was the occasional fashionable chimera which diverted attention and
resources from projects that later turned out to have been more needful.
A brief consideration of unfashionable improbabilities is not open to the
same objection. In any case, it has usually been lack of imagination,
rather than excess of it, that caused unfortunate decisions and missed
opportunities. It is just because the fashionably hypothetical may domi-
nate current planning and discussion that it is important to emphasize
the relevance of the unfashionably hypothetical. Hopefully, reality will
not introduce some of its acid but potentially bloody operational tests.

It may also be important to have some perspective on the role and relative importance of any particular issue or problem. There are important differences here among the researcher, policy adviser and policy-maker. In many areas good work can result only from systematic, sustained perseverance, often in the face of intellectual, social, bureaucratic, or other difficulties. Often sufficient motivation for such an effort can result only from an exaggerated estimate of importance which leads to a dedicated or fanatic intensity of effort. However, when it becomes time to integrate this work into the total body of policy, the subject must be restored to its proper perspective. While it is the viewpoint of this report that a competent discussion of the strategic issues during the Decade may be of more importance than is believed by those who cannot think of degrees and gradations when it comes to the deterring, fighting, or terminating of thermonuclear wars, we will also argue that the importance of strategic issues tends to be overestimated by those who engage more or less full-time in military planning or operation. Tolerance and forbearance on the part of the generalists toward the more specialized and parochial professionals, and vice versa, are more likely to lead to useful communications and eventual balance than an invidious emphasizing, or even magnification, of the biases observed.

2.   Clarify, Define, Name, Expound, and Argue the Major Issues

It is occasionally assumed that there is widespread and explicit agreement about:

a)   which issues are important,
b)   what stands on them are possible or reasonable,
c)   what are the major arguments for each of these stands.

In point of fact, no such second-order agreement[2] exists, except possibly in a few close-knit circles or on a few limited issues which were in the spotlight of attention in recent years. Many other equally or more important issues remain unrecognized, undefined, and undiscussed. Such recognition and definition is of the utmost importance.

Assume, however, that the issues have been clarified and defined. It is now often useful to categorize and name them. This can lead to several difficulties. In the short run, any fixed classification system does some violence to the subject--introducing artificial distinctions and likenesses, while doing violence to or distorting other distinctions and likenesses. In the long run attention shifts and the nomenclature that is left over from an irrelevant focus or context may make future discussions of then current issues more difficult. Such naming may also create the problem of having appropriate words "used up" by giving them a special technical meaning. However, we believe it is better to risk all of this than to give up the

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[2]First-order agreement is agreement on substance--i.e., on assumptions, values, or the policy to be pursued. Second-order agreement is agreement on what the disagreement is about.

convenience of actually having simple labels for relevant packages of com-
plex issues, even though it introduces some distortion into the present;
and the future will likely make even the best classification and naming
system more or less obsolete. One thing we have a right to expect of a
competent professional group is that they be able to learn and use a tem-
porary vocabulary with skill and discretion and still be consciously and
intellectually capable of changing this vocabulary to meet changing needs.

The main object, of course, of the discussion should be to expound
and argue these main issues. What is important here is to take each issue
seriously enough and to carry the argument deeply enough so that a further
superficial examination will not uncover crucial new arguments and factors.
The position taken by the participants should be informed enough to stand
up under the usual analysis.

It is startling how often in meetings it occurs that the raising of
a single not-too-complicated point shifts many positions. Conversely,
many (unshiftable) positions are revealed as simple and unconsidered,
even if strong, reactions to narrow aspects of the problem. In other
words, the customary arguments used are often parochial, specialized,
mostly unexamined, and sometimes self-serving. This not only leads to
unnecessary biases, it may even be counterproductive to the holder's
interests. For example, from the viewpoint of efficient political manip-
ulation, it is of some importance to be empathetic with the audience to
be manipulated. It is a fair characterization of most reports prepared
in the various subdivisions of the Department of Defense that these re-
ports tend to be prepared for audiences of "friends and relatives." They
have almost no chance of carrying conviction with or persuading a skepti-
cal, not to say a hostile, audience. Yet, to be useful, the exposition
and argumentation must be comprehensive enough, as discussed in point 4
below, to appeal to the relevant "majority." Such an attempt, even if
motivated by the most parochial considerations, will still result in bet-
ter recommendations.[3] From this point of view, in the past even relatively
simple concepts were not fully understood until several different analysts
in many different studies contributed to their clarification and definition.

By clarifying, defining, and naming many of the main concepts and
issues,this report attempts to provide both a floor and a framework for
the strategic debate in which the main issues can be expounded and argued
until our shared understanding of them grows in depth and sophistication.

3. Formulate and Study Many Alternative "Packages" and Contexts

As discussed in the previous two chapters, one important aspect of
such exposition and arguing is the use of proper contexts. Few measures
can be evaluated in isolation. They must be evaluated in a context of
other measures that are being pursued and also in terms of the criteria and
contexts set by the values and assumptions held by the policy maker (or

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[3]See pages 66 to 68 in this chapter.

makers). In order to facilitate such systematic comparisons it is
important to assemble a relatively large number of packages of specific
measures, so that one relatively complete policy can be compared with
another relatively complete policy. The number of packages will, of
course, be very small as compared to the total that are possible. How-
ever, in a relatively well-understood area, such a small number may still
provide a large enough set of examples so that almost all of the relevant
protagonists can recognize themselves in one package or the other. If
it is necessary to make finer distinctions, sub-packages within each
package can be defined or designed.

It should be clear that people with very different attitudes and
views may be put in the same package, since these packages are likely
to be fairly general and highly aggregated. But to the extent that
these issues can be discussed without going into the greater detail
which would separate the adherents of the same packages, it is often
worthwhile to do so. One can then at least get much of the general
discussion carried through in a systematic way. Of course, eventually
one must get into details which may be crucial and which will more or
less eliminate this superstructure of "packages," but it seems that
about 90% of the debates, particularly those conducted in offices, com-
mittee reports, interdepartmental conferences, briefings and so on, can
be discussed at a relatively general and aggregated level. This dis-
cussion can be greatly facilitated by the previous preparation and dis-
cussion of specific packages and the creation of shared understandings
or even second order agreement about most of the major issues raised by
the comparison of such packages.

A similar set of observations applies to the contexts in which these
packages are evaluated and re-evaluated. That is, a context is only a
subset of the many kinds of assumptions which are used, but it turns out
in practice that more of the real controversy involves assumptions about
over-all contexts than about specific details. The discussion of world
futures and prototype scenarios in the next chapter is intended to help
systematize an important part of this discussion of contexts.

In general, the systematic and careful study of the factors affecting
the main issues, and the constructing of a number of policy packages in
relation to varying contexts, will reveal a great number of interactions
among variables, including various incongruities, inconsistencies, incom-
patibilities, and dissonances as well as mutual reinforcements. A real-
istic attempt to reconcile and balance the costs and benefits of including,
modifying or excluding important variables and ingredients should lead to
an improved synthesis and balance. In particular, the formulation and
study of alternatives yields insights into the objectives and assumptions
that are behind each choice.

This report attempts to carry through all the above relatively
thoroughly and systematically for the fifteen Alternative Central War
Strategies defined in Chapter II and indicates how a similar program
might be carried out for some dozen alternative basic national security
policies as sketched in the last chapter.

4. Clarify Current Choices--(Hedging, Contingency Planning, and
    Compromising)

    Current choices are presumably based on the realities, objectives
and assumptions of today. Because all of these can change rapidly, it
is important to understand explicitly the relationship of the choice to
such realities, objectives, and assumptions, so that the choices can
change when the basis on which they were made changes. It is surprisingly
hard to do this, because most people--even professional analysts--tend
to forget the original reasons for their choices, and are then not willing
to change their positions. It often helps to reconstruct for such pro-
tagonists the histories of how they arrived at their positions, so that
they know explicitly what they would be giving up if they change their
minds. But it is not enough to know and remember the reasons for one's
choice. No choice is fully meaningful unless its alternatives are also
understood and appreciated. It is especially important to understand the
negative side of one's choice: the drawbacks and the costs associated
with it. A thorough-going satisfaction with all aspects of one's posi-
tion is often no more than an inability to see its problematic sides.
Clarifying a choice involves some awareness of the fact that there was
a choice and that something had to be sacrificed or compromised in com-
mitting oneself to it. One virtue of the Alternative Central War Stra-
tegies framework is that it tends to make explicit what is being left out
or de-emphasized, and thus focuses attention on costs as well as benefits.

    Thus while a major issue in making a choice is the adequacy of
performance in the context which one had in mind when making the choice,
equal or more thought must also be given to other situations which might
arise, as well as to assumptions or objectives which are different from
those that led one, personally, to his choice.

    This is part of the concept of hedging and contingency design. By
hedging we mean a modification of the preferred system that enables one
to cope with "off design" situations. Inside their own range of past
experience, decision-makers usually understand the need for hedging
against failure, i.e., for acquiring emergency capabilities for dealing
with relatively less favorable--including improbable--contingencies than
those expected when the choice was made. It is less frequently remem-
bered, but often equally important, that one should be able to take advan-
tage of unexpected but more favorable situations if they arise. That is,
one should also hedge to be in a position to exploit opportunities.

    Equally important as hedging and analytically very similar to it is
the process of attaining necessary accommodation with other people's
values and assumptions. We sometimes refer to this as putting together
the relevant majority. The process does indeed have many similarities
with other political processes. To the extent that divergent views can-
not be changed, they are rather like conflicting design criteria that
must be accommodated in systems design.[4] While we will not discuss here

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    [4]See Kahn, On Thermonuclear War, op. cit., especially pp.119-125; see
also Herman Kahn and Irwin Mann, Techniques of Systems Analysis, Santa
Monica, The RAND Corporation, RM-1829-1, June 1957.

the systematic techniques for doing this and the philosophy behind these techniques, we will discuss briefly one major point which is illustrated on the chart displayed below.

HYPOTHETICAL CROSS COMPARISON OF STRATEGIES

(Contingency Design)

PROPONENT / EVALUATOR	A	B	C	D	E	F	G
A	100	10	15	15	20	15	15
B	0	100	15	90	85	80	87
C	0	20	100	90	85	80	87
D	0	30	20	90	85	80	87
E	0	30	30	40	85	80	75
F	0	15	30	50	30	80	55
G	0	20	10	20	30	40	60

The above chart depicts a situation in which there are seven groups, labeled A-G, who are both proposing various policies and then trying to get together and agree on one or the other. The numbers in the boxes are the scores that each of these proponents gives to the other's proposals. A is a kind of fanatic. His proposals satisfy only himself but do nothing for the others. B and C are less fanatical, and so their proposals give some little utility to the others--but not very much. D, understanding ahead of time that he must put together a majority, carefully designs a proposal which gives a great deal to B, C, and D, even though it gives him less than he could have had. Automatically, such an attempt to cover a large range also gives more to such others as E and F than they would normally get if there had been no attempt to design

breadth and flexibility into the proposal, even if there is no explicit
consideration of E, C, F's values and assumptions. It may, however,
turn out that B, C, D, and E are too small a group to influence matters
decisively. E, however, designs his proposals to try to satisfy four
people, B, C, D, and E. Of course, as he is trying to satisfy more
people he does not do as well by any particular one of them. But at
least, he has put together a bare majority. F, on the contrary, tries
to satisfy too many people, B-F, and therefore, he cannot offer B-E as
good a proposal as E can. Presumably they will vote for E rather than
F. The last column, G, is supposed to illustrate a special possibility.
G notes that he can steal the voting away from E if he designs a proposal
which gives B, C, and D more than E would have given. Even though he
gets only 60 out of this proposal, if it is accepted, it is still more
than the 30 which E's proposal would have given him.

The above is by no means an artificial example. Forming policy is,
in fact, part of political give and take, but one of the real problems is
that the give and take involves so much time that when the policy is
finally set, valuable opportunities may have been lost or points of no
return passed. It is for this reason that in designing acceptable pro-
posals each proponent must, himself, do a good deal of the compromising
necessary, rather than wait until the rough and tumble of the political
give and take cause him to compromise and modify. It is important to
note that as "objective" analysts we should not care too much whether
E or F is finally chosen, so long as one of these two proposals is chosen
and not A, B, C, or even D.

5.   Create Propaedeutic and Heuristic Methodologies and Paradigms

This is one of the major objectives of this report; indeed the whole
report can be thought of as one large paradigm. By "paradigm" we mean
something more than a metaphor made explicit, and something less than an
analytical model in the sense of applied mathematics. We mean a struc-
tured set of explicit assumptions, definitions, typologies, conjectures,
analyses, and questions. Robert K. Merton has argued (and, with impres-
sive examples, has demonstrated) the great value of such paradigms for
sociological analyses; his points are equally valid for analyses of prob-
lems in national security policy. Paradigms, he points out, have five
closely related functions:[5]

First, paradigms have a notational function. They
provide a compact parsimonious arrangement of the central
concepts and their interrelations as these are utilized for
description and analysis. Having one's concepts set out in
sufficiently brief compass to permit their simultaneous
inspection is an important aid to self-correction of one's

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[5]Merton, Robert K. Social Theory and Social Structure, Glencoe,
Illinois, The Free Press, 1949, rev. ed. 1956; see especially pp. 12-16.

successive interpretations, a result difficult to achieve
when one's concepts are scattered and hidden in page after
page of discursive exposition....

Second, the explicit statement of analytical paradigms
lessens the likelihood of inadvertently importing hidden
assumptions and concepts, since each new assumption and each
new concept must either be logically derivable from the
previous terms of the paradigm or explicitly incorporated in
it. The paradigm thus supplies a pragmatic and logical guide
for the avoidance of ad hoc (i.e., logically irresponsible)
hypotheses.

Third, paradigms advance the cumulation of theoretical
interpretation. In this connection, we can regard the
paradigm as the foundation upon which the house of inter-
pretations is built. If a new story cannot be built directly
upon the paradigmatic foundations, if it cannot be derived
from the foundations, then it must be considered a new wing
of the total structure, and the foundations (of concepts and
assumptions) must be extended to support the new wing. More-
over, each new story which can be built upon the original
foundations strengthens our confidence in their substantial
quality just as every new extension, precisely because it
requires additional foundations, leads us to suspect the
soundness of the original substructure....

Fourth, paradigms, by their very arrangement, suggest
the systematic cross-tabulation of presumably significant
concepts and may thus sensitize the analyst to types of
empirical and theoretic problems which might otherwise be
overlooked. They promote analysis rather than concrete
description....

Fifth, and in this accounting, finally, paradigms make
for the codification of methods of qualitative analysis in
a manner approximating the logical, if not the empirical,
rigor of quantitative analysis...(Quantitative) procedures
are expressly codified as a matter of course: they are
open to inspection by all, and the assumptions and pro-
cedures can be critically scrutinized by all who care to
read. In frequent contrast to this public character of
codified quantitative analysis, the...analysis of qualita-
tive data is assumed to reside in a private world inhabited
exclusively by penetrating but unfathomable insights and by
ineffable understandings. Indeed, discursive expositions
not based upon an explicit paradigm often involve perceptive
interpretations; as the cant phrase has it, they are rich in
"illuminating insights." But it is not always clear just
which operations with analytic concepts were involved in
these insights. There consequently results an aggregate of
discrete insights rather than a codified body of knowledge,
subject to reproducible research.....

> Since all virtues can readily become vices merely by
> being carried to excess, the...paradigm can be abused almost
> as easily as it can be used. It is a temptation to mental
> indolence. Equipped with his paradigm, the (analyst) may
> shut his eyes to strategic data not expressly called for in
> the paradigm. He may turn the paradigm from a...field-glass
> into a...blinder. Misuse results from absolutizing the
> paradigm rather than using it tentatively, as a point of
> departure.
>
> The paradigms in this book are, without exception,
> provisional, undoubtedly destined to be modified in the
> immediate future as they have been in the recent past. But
> for the time being, these explicit paradigms seem preferable
> to tacit assumptions.

What Merton says of the paradigms in his book applies with even
greater force to ours. In national security policy, even more than in
sociological analysis, the problems are changing rapidly, with new tech-
nologies, new politics, and new strategic concepts. Our paradigms are
far more "provisional" and subject to revision than Merton's. We are not
building a cumulative science in quite the same sense as Merton is, but
we are attempting to improve the quality of discussion and analysis; thus
our requirements for explicitness and clarity of notations and assumptions,
and for progressive, cumulative, and systematic explication and codifi-
cation of ideas, are equally strong. As in any field of inquiry in which
concerted efforts and cumulative improvements are sought, propaedeutic
and heuristic devices are urgently needed.

One of the difficulties with getting enlightened and informed
decision-making today is that so many people have to know so much about
each other's fields. About half the time of any particular, specialized
decision-maker is spent becoming familiar with allied information from
complementary and supplementary specializations. It is of extreme impor-
tance, under these circumstances, to have in effect a simple "college
outline" type of literature that is directly pointed to the needs of these
people. Such literature, of course, can only be produced to order; it is
not produced accidentally. By "literature" we include, of course, method-
ologies for analysis and design. For example, we hope that almost any
competent engineer reading this report can get a good many simple, yet
sophisticated ideas of how international relations and larger issues should
influence his weapons systems designs; he may even acquire some complex,
sophisticated and subtle nuances.

Of course, experts in particular fields are likely to feel some
annoyance, if not anger, at the seemingly simplistic ways in which com-
plicated ideas must be used for inter-disciplinary purposes, such as
planning. But this is a classical problem, one which is more severe, the
closer the ideas are to the experts. Non-expert usages have a tendency
to seem to experts to parody, vulgarize, or satirize their stock-in-
trade. And in any case, experts are always annoyed by intruders who have

a sort of _ad hoc_ competency in their fields, but do not really have the depth and background that the expert feels are essential. Though we sympathize with this feeling, it seems clear that the necessities of planning must override, and the judgment must, as always, be made on a heuristic and pragmatic basis. We believe it to be an observable fact that planning requires that at least some participants step outside their specialties.[6]

The kind of work that has to be done on national security problems simply requires the integration, at least at a superficial level, of a large number of different disciplines. Almost anything that would help in doing this should be encouraged. We must maintain standards of depth and thoroughness, but they should not be self-defeating standards that prevent an important job from being begun. Almost necessarily, interdisciplinary workers must rely on "secondary sources," or on the advice of experts whom they have difficulty evaluating, though this problem can be much alleviated by a suitable playing of experts against each other.[7] "Teams" of experts cannot avoid the problem of the non-expert; at some point a plan or solution must be achieved, and this can take place only "within a single skull" (Clyde Kluckhohn's phrase). Thus one or more specialists must step outside their fields, or one or more non-specialists must perform the final integration of specialties. Both the realistic seriousness of this problem and the somewhat unreasonable irritation we have referred to will be much reduced if a better set of shared concepts and common vocabulary as well as special propaedeutic devices are developed.

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[6] I was trained as an applied mathematician and physicist, and occasionally I have explained certain ideas in either applied mathematics or physics to people trained in other fields. Later, I have heard these explanations used by these people in their own briefings. Usually I had no specific objection to what they said, but I felt slightly frustrated and annoyed. When a speaker on a platform discusses a subject there should be an iceberg effect—he should be giving only about 1/8 of what he knows. But these speakers were inverse icebergs—they were telling approximately 7/8 or more of what they knew about that particular subject. Even though the speaker often (but not always) apologized for lecturing outside his field, I still felt, probably unreasonably, that some degree of fraud was being perpetrated on the audience. For one thing, I knew that at that point, he couldn't answer "deep" questions: I had the not-uncommon feeling that anyone who speaks publicly or writes on a subject _ought_ to be able to answer such questions, whether or not they are asked, and even though, strictly speaking, they would be irrelevant to the point he was making. But it was also that I couldn't help being annoyed at the subtle differences in style—almost like having the wrong accent, or wearing the wrong clothes—by which the non-expert gives himself away even when he is making correct statements. Such reactions are to be expected, but they should not be permitted to interfere with work that needs to be done. (H.K.)

[7] See Herman Kahn and Irwin Mann, _Ten Common Pitfalls_, Santa Monica, The RAND Corporation, pp. 49-52.

6. Identify and Understand Developing Patterns

The major reason why one needs such artificial devices as a spe-
cially created "college outline" type of literature and paradigms for
strategic analysis is the rapidity with which changes occur. If the
changes were slower, the various specialists would gradually learn that
which is needed for them to perform their functions effectively, and the
normal methods of providing textbooks, literature, and expert profes-
sionals would suffice. So the essence of our problem is that we must
cope with new problems and concepts.

By devoting attention to strategic purposes and postures in a num-
ber of future settings it is possible to identify and study patterns that
train the analyst in the recognition of the patterns that are actually
developing in the real world. Thus a series of studies like the present
one can be of service in facilitating reaction to such patterns. As a
result, there will be fewer wrong decisions, fewer unpleasant surprises.
and fewer missed opportunities. Understanding developing patterns may
not make the future our servant, but it certainly helps us to take
advantage of some of its opportunities.

Indeed our giant apparatus of defense research and engineering,
procurement and operation has become so complex and deals with such
difficult problems that lead times have become its limiting factors,
more than expenditures or levels of effort. This is so true that apart
from the limitation of resources there is one major factor inhibiting
many promising developments: the fear that the whole system will be
obsolete before it can ever be in operation. In this field, therefore,
perhaps more than any other, the early recognition of developing patterns
is of the utmost importance.

In some cases just classical historical insight can be useful. To
take a possibly controversial example, much of the recent shock and sur-
prise at de Gaulle's intransigence seems superfluous. After all, Europe
has gone through fifteen years of sustained growth which has gone a great
distance toward restoring its vitality and confidence. The NATO alliance
is 18 years old. Relatively few alliances have lasted into a postwar
period with such changes without suffering equally large changes them-
selves. It may be that the most reasonable reaction to many of the
demands now raised by the French is, "Why so late?" and "Why so modest?"
Thus while the new pattern into which NATO may develop may not be clear
(see Chapter V for some possibilities), it should have been clear that
the old pattern couldn't last much longer unchanged--whether or not
de Gaulle ever became the leader of France.

7. Improve Learning, Communication and Intellectual Cooperation--
    (by the use of Historical Examples, Scenarios, Metaphors, Simple
    Models, Concepts and Language)

One difficulty in devising pragmatic rules and heuristic hypotheses
to deal with such hypothetical situations as the waging of thermonuclear
war and the proper conduct of international relations in a thermonuclear
world is that we do not have a great fund of even intellectual experience

to draw upon. Such experiences, whether actual or vicarious (through the
literature that would be an inevitable result of actual experience),
would be a rich source of analogies, illustrations, and language. Further-
more, the sharing of such experience would have resulted in the creation
of many meaningful concepts and metaphors, all of which are useful if not
essential for the proper analysis and discussion of any complicated
aspect of social relations. This is true even for an individual working
on his own study, but it is even more true if there is to be a large
community of scholars and practioners who are to work together on these
problems in a creative and useful fashion. It is, of course, inevitably
true that the larger the group that participates in the debate and in
design and decision-making, the narrower the limits of shared under-
standings and subtleties that are possible or at least likely. Small
groups that cooperate in a debate frequently tend to develop special
connotations for words and elements of precision in their terms that
outsiders do not share, even though it may seem to the outsiders that
the debate contains nothing that they fail to follow. Truly professional
groups always use a technical jargon and assume that all members will be
familiar with the major studies and chief illustrative examples of the
"theorems." We discuss in the next chapter the creation and use of arti-
ficial "case histories" and "historical examples" to supplement and com-
plement the paucity of real examples, but we note that there seems to
be insufficient exploitation of the examples that are available.[8]

In Appendix I, in discussing such terms as "not incredible" and
"not unlikely," we will indicate that they are occasionally used with a
precision and connotation which is partly artificial and arbitrary but
quite useful. In fact we often go so far as to assign numbers to the
limits of the probability spectrum covered by the terms. It should be
clearly understood that the purpose of using numbers for very precise
statements is not because we can, in fact, make extremely precise
estimates as to the situation. The purpose is rather to facilitate
communication. Qualitative statements are most useful for telling the
listener how the speaker _feels_ about a situation, but if the speaker
wishes to communicate something about the world or his estimate of it,
rather than about his own feeling about it, he can be most explicit and
unambiguous by using quantitative terms. Thus if the speaker says,
"That widget is five feet high," the listener learns exactly how high
the speaker thinks it is; but if the speaker says instead, "That is very
small, for a widget," the listener learns both more and less than from
the quantitative statement. Both kinds of statements have their uses;
both fail to tell us all we might like to know. It would facilitate
communication if the speaker would say, "That widget is smaller than two-
thirds of those I have seen"; if in addition he knows the measurements
of that widget, or the mean size of all widgets, the standard deviation

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[8]We need, in other words, a much larger and more useful set of
"names" for certain kinds of situations, such as "atomic blackmail," "the
Nth country problem," "Munich," etc. For one attempt in this direction,
see Chapter II, "A Range of Crises," in Wiener and Kahn (eds.), _Crises and
Arms Control_, op. _cit_.; see also Kahn, _On Thermonuclear War_, op. _cit_.,
pp. 523-531.

of their distribution, and limits if any, so much the better. If we are
discussing programs or contingencies, it is clear that words like "big,"
"small," "likely," and "unlikely," do not give us a very clear indication
of what the speaker has in mind. Thus the speaker may do well to quan-
tify even where he has made no measurements, simply in order to communi-
cate more precisely the kinds of concepts and estimates he has in mind.

8.   Furnish Specific Substantive Knowledge, Conclusions, Recommendations and Suggestions

This unclassified report will be exceptional in not containing very
many, if any, specific conclusions, recommendations, or suggestions. It
is intended, as the title suggests, as a framework for the strategic
debate in the years 1965 to 1975. If this report has succeeded in ful-
filling objectives 1 to 7, others should be able to build on it and reach
specific conclusions in various fields. If we have succeeded in doing
useful groundwork for the future debate, the report should result in
studies which will be productive in recommendations and suggestions.

Even so, such studies can rarely be definitive. They must neces-
sarily limit themselves to particular aspects of a very wide field and
cannot be expected to be conclusive outside rather narrow limits. Fur-
thermore, while they can make the consideration of imponderables more
explicit, they can scarcely enable the decision-maker to evade his pre-
rogatives and responsibilities by actually supplying him with specific
solutions for various trades, compromises, and dilemmas.

It is true that on rare occasions, a study will be able to make its
final recommendations with great force and authority: but such recom-
mendations will almost always be limited to a very narrow area that
has been thoroughly covered by the study and in which the basic context
and assumptions--at least as to objectives--are not controversial.
Broader recommendations and suggestions cannot be expected to have abso-
lute force.

This is by no means to say that the decision-maker should disregard
"narrow" studies. On the contrary, it will nearly always be of advantage
to take the results of such studies into account in the process of reach-
ing a decision. There is a great difference between an informed choice
and a decision from ignorance or by default.

9.   Broaden and Improve the Basis for Over-All Political Decision-Making

Any improvement in the technical or political debates, any improve-
ment in communication and shared understandings, in making basic issues
clearer, is likely to result in greater understanding at the upper levels
of government, within intellectual elites, and among people generally.
But the universal understanding can be more than intellectual. It can
also result in both the people and their leaders becoming morally sensi-
tive, morally informed and morally tough-minded. We will discuss the

likelihood and importance of this possibility in Chapter X. However, we cannot help but feel that stimulating the study of the crucial problems and drawing attention to potentially necessary decisions and acts are minimum requirements if we are to cope successfully with the problems of the future.

It may turn out, as is suggested below, that all we can do is improve our capability to muddle through. But this in itself will be a great achievement. It may also turn out, in partial contradiction to what is stated below, that we will be able to lay down broad, continuous guidelines for policies in a more logical and rational way if we are better informed and more conscious of the full range of considerations. In any case the minimum objectives are well worth meeting.

10.   Increase Likelihood of Rapid and Appropriate Reaction to New Patterns and Unexpected Crises

If we achieve some success with the nine objectives discussed above, we will in the process have greatly increased our understanding of strategic requirements, and we will also have gained a capability to reduce the time necessary to react. Critical situations and problems will have been studied with enough intensity to get attention and lead to action. Many of the new and unusual problems of policy planning will seem much less bizarre and appear instead as a routine responsibility of the proper staffs. It will be less likely that we fail to guard against or fail to prepare to exploit possible developments because of overconcentration on the current pattern. To the extent that such choices are made, they will be deliberate, rather than by default. However, even if we achieve the greatest success in our objectives, we will still have to follow, to some degree, a "muddling through" or opportunistic policy. The pragmatic approach typical of Americans and their government is not going to be replaced by a professional staff dealing in technical fashion with technical questions. Indeed, one way to view the whole program sketched out above is as a basis for a planned kind of muddling through. It prevents the foreclosure of options that would make muddling through impossible, and enhances the consensus on basic directions and destinations that makes muddling through successful.9 In the final analysis we will best be able to judge problems when we come to them. In the same way that one can have lags in understanding or in preparations, one can have doctrinal lags; one can also have over-anticipations. Anticipatory reactions, particularly when they result in an increase in flexibility and generalized capability, can be extremely valuable. Anticipatory actions which overformulate the problem and define it too rigidly may lead to disaster. But disasters are more likely to occur as a result of too little study, debate and thinking, than from too much, especially if the need for both flexibility and decisiveness is never forgotten.

9See Wiener and Kahn, "Summary of Recommendations from Crises and Arms Control," HI-288-RR, September 9, 1963, pp. 5-19 and 64-66.

CHAPTER V

ALTERNATIVE WORLD FUTURES AND THE USE OF SCENARIOS AND GAMING

Scenarios and Gaming

One of the most important aspects of the postwar international arena is the emphasis on deterrence. This often means that programs are supposed to work without a single failure; thus there can be no realistic testing or straining of the system without having one failure too many or risking such a catastrophe. However, deterrence does seem to work remarkably well in the sense that almost everybody judges that if both sides are competent, central wars, or even very intense crises, are relatively unlikely to arise between the Soviet Union and the United States in, say, the next decade or two. And yet the weapons exist and may be used. Even those who think that thermonuclear war is unlikely in the next hundred years; even those who believe that the invention and procurement of thousands of nuclear weapons in the middle of the twentieth century has effectively abolished, or will lead peacefully and inevitably to the abolishment of all-out war cannot be certain. They are still obliged to examine the circumstances in which these weapons may be used or, possibly more important, the ways in which their existence and threat of their use may influence sub-war events in an important way. One of the most important problems in this examination arises from the inherent implausibility--whether justified or deceptive--of the kinds of events which are being studied. One basic objective, therefore, is somehow to find and examine the most plausible examples of the most important cases that tend to be overlooked by the standard methods of studying these problems.

Two now common semi-analytical approaches to this problem are the "scenario" and the war (or peace) game. These are methodological devices which have become more and more common wherever efforts have been made to generate relatively plausible contexts in which the requirements of future weapons, command and control systems, war-fighting strategies, and arms control agreements may be tested or at least evaluated or discussed.

Such scenarios attempt to describe in more or less detail some hypothetical sequence of events. They can emphasize different aspects of "future history." Some scenarios may explore and emphasize an element of a larger problem such as a crisis or other event which could lead to war, the process of "escalation" of a small war or local violence into a larger war, the spread or contraction of a limited war, the fighting of a war, the termination of the war, or the subsequent peace. The focus of the scenario can be military events and activities, the internal dynamics of various countries, bargaining among enemies or inter-ally relations, and so on. The scenario is particularly suited to dealing with several aspects of a problem more or less simultaneously. By the use of a relatively extensive scenario, the analyst may be able to get a feel for events and the branching points dependent upon critical choices. These branches can then be explored more or less systematically.

Some of the advantages of the scenario as an aid to thinking are:

(1) They serve almost all of the objectives of the last chapter by
calling attention, sometimes dramatically and persuasively, to the larger
range of possibilities that must be considered in strategic analysis. They
are one of the most effective tools in lessening the "carry-over" thinking
that is likely even when it is clear to all that 1965 cannot be the same
as 1945 or even 1960. Scenarios are one way to force oneself and others
to plunge into the unfamiliar and rapidly changing world of the present
and the future: They dramatize and illustrate the possibilities they focus
on in a very useful way. (They may do little or nothing for the possibili-
ties they do not focus on.)

(2) They force the analyst to deal with details and dynamics which
he might easily avoid treating if he restricted himself to abstract con-
siderations. Typically no particular set of the many possible sets of
details and dynamics seems specially worth treating, so none are treated,
even though a detailed investigation of even a few arbitrarily chosen cases
can be most helpful.

(3) They help to illuminate the interaction of psychological, social,
political, and military factors, including the influence of individual po-
litical personalities upon what otherwise might be abstract strategic deci-
sions, and they do so in a form which permits the comprehension of many
interacting elements at once.

(4) They can illustrate forcefully, sometimes in oversimplified
fashion, certain principles or questions which would be ignored or lost
if one insisted on taking examples only from the complex and controversial
real world.

(5) They may also be used to consider alternative possible outcomes
of certain real past and present crises, such as Suez, Lebanon, Laos, or
Berlin.

(6) They can be used as artificial "case histories" and "historical
anecdotes" to make up to some degree for the paucity of actual examples
(see last chapter, pages 72 to 73).

The use of scenarios has been criticized both as being paranoid and
schizophrenic. In the first case, the criticism is sometimes that only the
paranoid personality, unjustifiably distrustful and suspicious, could con-
ceive of the kind of plots and hostilities that characterize many scenarios.
This criticism hardly seems relevant, or, if relevant, justified. The ana-
lyst is, of course, interested in any ingenious or unpleasant means others
might contrive to destroy his country; he is also interested in what they
might not do. To the extent that the criticism of paranoia is justified,
it pertains more to the plausibility of a particular scenario than to the
methodology in itself.

The second "diagnosis" may be more to the point. The criticism now
is that scenarios may be so divorced from reality as not only to be use-
less but misleading, and therefore dangerous. However one must remember
that the scenario is not used as a predictive device. The analyst is
often dealing with the unknown and to some degree unknowable future. In
many specific cases it is hard to see how critics can be so certain there
is a sure divorce from a reality which does not yet exist and may yet sur-
prise them. Imagination has always been one of the principal means for
dealing in various ways with the future, and the scenario is simply one
of many devices useful in stimulating and disciplining the imagination.
To the extent that particular scenarios may be divorced from reality,
this again seems more a criticism of particular scenarios rather than of
the methodology.

It is also worth noting that for some purposes mistakes in partic-
ulars may be of secondary importance. For example, many today are con-
cerned about France as an increasingly important nuclear power with vague
and uncertain motivations and a dynamism unsuspected fifteen years ago.
By 1975 France may be weak and disunited. But similar problems may then
be posed by Italy or Japan. Many of these specific problems as viewed by
the United States would be much the same as though the new power were
France. This does not mean all problems would be the same, only that
those problems of the real Italy of 1975 which perhaps could have been
predicted by a supremely competent planner of 1963 might not look very
different from those abstract problems actually predicted for the hypo-
theical France of 1975, since both "predictions," the actual ones about
France and the hypothetical ones by the nonexistent supremely competent
planner, are necessarily abstracted from reality. However, if a scenario
is to seem plausible it must, of course, relate at the outset to some
reasonable version of the present, and must throughout relate rationally
to the way people could behave. Since plausibility is a great virtue in
a scenario, one should, subject to other considerations, try to achieve
it, even though it is important not to limit oneself to the most plaus-
ible, conventional, or probable situations and behavior.

We will also consider in this chapter a related methodological de-
vice--the systematic generation of gross "future world" contexts which
can then be used in generating scenarios or games. These world futures
are also of interest as contexts for discussion, exposition, argumenta-
tion, and making assumptions explicit when drawing up a BNSP.

Scenarios have many serious defects, some of which are alleviated
by using the world futures methodology. For example, so far as scenarios
are the product of a single imagination, writing a scenario may do little
to cure the defect of bias except to make the issue more explicit and thus
possibly controllable in some degree. But even when two or more analysts
collaborate on it, the scenario, like most other methods of analysis, re-
mains a kind of self-contained universe: it cannot be objectively tested
until the date of the scenario is so close in time that the projection
may be matched against observed reality and sometimes not even then.
Plausibility can usually only be determined, if at all, by asking

whether identifiable characteristics of the present can reasonably be
carried forward to the future, and if so, in what degree. As for the con-
sistency, this problem is not easily resolved either. The future is not a
one- or two-body problem, but a multi-body problem; and therefore simplis-
tic projections of the future normally suffer from a gross distortion--a
distortion which derives from the simple projection forward of one or two
of the bodies implicit in a future "world" without a concomitant projec-
tion forward of the evolutionary trends for all. That is to say, a stand-
ard central war scenario for the late 1960's or early 1970's, beginning
with a crisis on the Berlin approaches which escalates to high levels of
violence, may project a Soviet Union which has resumed the ideological of-
fensive, abandoning the doctrine of peaceful coexistence, or one which
has fallen to the control of a military faction, and in each case hypothe-
size Soviet military forces and technology in considerable detail. But
seldom are such seemingly subordinate factors as the ideological cohesion
of the Soviet Bloc, the state of Soviet-Rumanian relations or the produc-
tivity of Soviet agriculture adumbrated in sufficient supporting detail to
test whether they could have been important. Thus most scenarios fail on
this test of internal consistency and even more often on the test of com-
pleteness. These defects are always present, and all that one can do is
to try to identify the more relevant factors and have a reasonably consis-
tent level of aggregation. The world futures methodology described here
can help greatly in doing this.

As for war games, to the degree that they are commonly impromptu per-
formances, they are even less likely than scenarios to take into account
the necessary multiplicity of factors which are not explicitly incorporated
into the game; and even where elaborate pre-game preparations are made, the
roles played (the U.S.S.R., the United States, SUSAC, NATO, etc.) are us-
ually (indeed often intentionally) no more than projections or would-be
transcripts of future "reality" <u>as conceived by the players themselves</u>.
That is to say, the kind of U.S.S.R. played in a war game or the tactics
adopted by hypothetical Chinese Communists in an attack on Quemoy are
likely to reflect mostly the players' private understanding of Soviet or
Chinese behavior, motives, and capabilities. Thus, in the ordinary, rela-
tively unstructured war game the primary effort is frequently to deduce
the future from the hypotheses of more or less expert players. While there
will be a good deal of interaction among the players, referees, and nature,
in the final analysis most of the decisions as to what is likely to happen
or what could happen will be made by the players themselves and reflect
their personal capabilities and understandings. While hypotheses thus made
may frequently be good, or even highly inspired, intuitions of future truth,
they are in no sense "objective." In such gaming exercises, the major pre-
mium is entirely on the quality of understanding of the individual player
(or team); expertise in such games can only be learned by others through
an arduous process of specialized and technical training. Again, the world
futures methodology may help greatly in supplying broader, more consistent
or more interesting, and to some degree more objective contexts.

Alternative Future Worlds (AFW's)

Thus for the purpose of supplying appropriate political-military environments and for comparing and contrasting certain aspects of the strategic debate, it may be useful to construct a broad range of future world contexts within which we may hope to include the expectations (and the hopes and fears) of policy planners. By constructing a series of named worlds and more or less consistently treating the factors involved in a comparable fashion, we may both be able to understand each one separately better, and by making arguments clearer lead to more emphasis on the most important cases and situations. Thus, while the details of the war-gaming and scenarios will tend to remain within the framework of the previous unexplicated intuitions of individuals, whether experts or laymen, this tendency can be controlled or alleviated by supplying better contexts.

One can, of course, construct AFW's as needed for any particular project. This is often a quite useful thing to do. However, it turns out to be surprisingly difficult to turn out an interesting and useful set of AFW's so that it is difficult to justify the investment for a small research project; it simply seems to take too much time, energy and capability. There are several reasons why one might wish to construct a number of them systematically as a project in its own right, to be used subsequently by others in various applications. The construction of such worlds involves the creation of intellectual capital and, as in many cases, the capital is proportional to that which was invested in it. One can afford a higher investment if the project is to have a number of uses. It is, of course, true that this intellectual capital has a short lifetime. As events occur, many of the worlds will become obsolete or even silly-looking (while a few, of course, may look even better, but then it will be necessary to investigate these better ones in more detail, following more branches). However, it is exactly this kind of intellectual activity which requires a relatively large investment that may become obsolete in future years and that will therefore probably not be undertaken by a single scholar or individual for his own ends, or even as a single project that must be supported as an activity in its own right. It is also quite valuable to have the worlds developed by a group. Developing worlds requires a large number of skills and no particular expert is likely to have equal competency over the entire world. This is another reason why the ad hoc construction of AFW's for specific projects by analysts who happen to be available to the project can be inferior. When one tries to apply the AFW's to a specific project he may find that a good deal of adaptation is needed to make them fit. But this adaptation is a far easier task than starting from a blank page.

The Construction of Alternative Future Worlds

One can use many initial approaches in creating an Alternative Future World. We can, somewhat arbitrarily, classify these many approaches into eight categories as indicated in the diagram below.
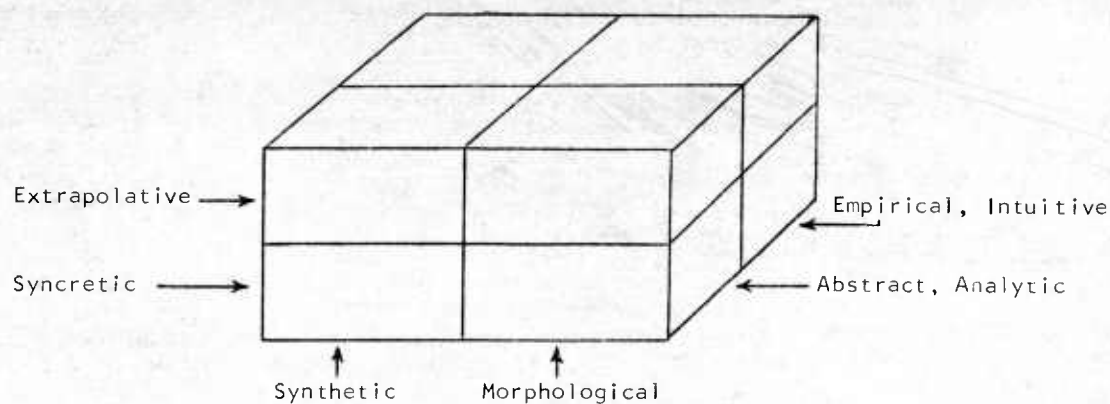
Actually, of course, the synthetic-morphological, extrapolative-syncretic, and the empirical, intuitive--abstract, analytic dichotomies really represent extremes on a continuum. There are no actual sharp dividing lines, only a more so and less so type of relation, so there are more than eight combinations possible. Very briefly each of the above words is supposed to designate various initial approaches as follows:

Synthetic--One starts with separate parts or areas such as those listed on the BNSP chart on page 46 and after specifying these areas to some degree puts them together to create a whole, reconciling any contradictions that emerge. As always, the process can be iterated, the whole being used to get better parts.

Morphological--Exactly the same iteration, except one now starts first with general gross features that describe the world, more or less as a whole, and then having specified these, describes or constructs specific areas and entities. One can think of the synthetic as starting with actors and situations and then looking around for an environment in which to put them, while the morphological starts with the environment and then looks around for actors and situations.

Extrapolative--One starts with the world as it exists today, after identifying important entities, factors and trends, and then extrapolates these entities, factors or trends in a more or less complicated fashion to get various future possibilities, emphasizing those entities, trends and factors that seem to be of the most interest for the applications.

Syncretic--One starts at the final point with some kind of interest-
ing world that he wishes to investigate and then attempts to reconcile
his tentative beliefs about this future world he has constructed with his
beliefs about the present world. This reconciliation can be done by try-
ing to identify trends and factors which can be used as a starting point
for a suitable scenario that develops the present world into the one that
he has just constructed. In order to carry through this process it may
be necessary to modify both the image of the (real) world (emphasize
relatively implausible or less important entities, factors, or trends)
and the image of the future world and in addition use relatively implau-
sible scenarios or some combination of all of these things.

Intuitive-Empirical--This approach is one which is most likely to be
spontaneously chosen by either the amateur or the expert, usually in combi-
nation with one of the extrapolative techniques just described. In the
intuitive-empirical approach one first identifies relatively concrete as-
pects of entities, factors, and trends or familiar everyday abstractions
and then uses these concrete descriptions and non-esoteric abstractions in
the construction of a world future.

Abstract-Analytic--In this approach, one first abstracts from the
world--usually by making some kind of model or analogue--and then uses
the variables of the model in one of the above approaches. The model or
analogue can be quite primitive and intuitive just as long as the variable
can be defined and specified.

All eight combinations seem to be useful; but there is some tendency
for the abstract, analytical techniques to go with the morphological
approaches and the intuitive, empirical techniques to go with the extrap-
olative approach. It is thus possible to start in at least eight dif-
ferent ways. Actually since the dichotomies are really continuums we
have even more freedom, and a flexible mixture of some of the dichotomies
will often be the most useful approach. Also in principle one can start
with any approach and after going through a suitable number of iterations
end up at the same place, but in practice each technique has strengths
and weaknesses. Some of these possibilities should become clearer in the
discussion.

We will start with a description of the extrapolative approaches
that were covered in our report to ESD (see preface) and go on to discuss
some possibilities and examples of the syncretic and morphological ap-
proaches, without worrying too much that there may be some overlap in
the discussions (since there are overlaps in the classifications).

Extrapolative: We start with the likely characteristics of almost
any world of the next decade or so. The following two lists give a very
gross but plausible picture of some aspects of the next decade. The
first characterizes the early and mid-sixties:

Political Factors

Mostly bipolar world--important degree of polycentrism
Some degree of U.S.-S.U. detente
European nation-state system passing
Growing disinterest in aggression by major developed nations
Increased nationalism in Africa, Asia, and Latin America
Growth of international organizations
Western colonialism liquidated
Incipient frustration of "revolution of rising expectations"
Indications of future multipolarity
NATO becoming a dumbbell (U.S. vs. weak Franco-German Alliance)
Sino-Soviet Bloc breaking up
Relatively strong sanctions against nuclear diffusion
Hostile emotions (nationalistic, racial, greedy, vengeful, ambitious,
        etc.) are coerced, restrained, diverted or sublimated

Military Factors

World spends $100-150 billion annually on defense
U.S and S.U. have balanced missile-bomber forces
Increasing invulnerability of strategic forces (hard or mobile)
Both U.S. and S.U. first-strike advantage less overwhelming
Significant U.S. strategic superiority
Alert forces in both U.S. and S.U.
2.355 nuclear countries[1]
Implicit arms control important

The next list attempts a similar picture of some aspects of the early and mid-seventies. Because it is further in the future it is less specific:

Return of Multipolarity

EEC and Soviet Union have GNP of $\sim$ $500 billion/annum.
France, Germany, and Japan have "assertive" arms policies.
China may have $100 billion/annum GNP.
Japan should have $100-200 billion/annum GNP.
Among other nations, 5-10 may spend more than $1 billion/year on
        defense.
An additional 10-20 may spend more than $.1 billion and less than
        $1 billion/year.
The above 15-30 nations may also have "assertive" arms policies.

---

[1]The United States and the Soviet Union count as one each, England counts as .1, France is .1, Germany is .05, Israel is .005, and China is an unknown quantity which we have arbitrarily counted as .1. (These somewhat facetious numbers are much too large to represent fractions of current super-power capability; instead they represent estimates of the extent to which these nations begin to pose Nth country problems. In these terms, both China and France, for different reasons, may be counted equal to England.

The (Classified?) Technology of the Early Seventies

Very cheap, very simple nuclear warheads
Cheap, simple missile systems
Simple techniques for "invulnerability"
Third or fourth generation ABM
Cheap and effective chemical or bacteriological warfare?
Disguised or anonymous warfare?
Well-understood doomsday and near doomsday machines?
Other exotic weapons systems (tsunami producers, climate changers,
        earth scorchers, etc.)
Other equipment (satellites, space platforms, lasers, masers,
        gigacycle computers, hydrofoil ships, ground-effect machines,
        stol and vtol, high accuracy flexible bombing systems,
        specialized nuclear weapons, and so on)

Some Possible Political Factors

Population explosion
Nuclear stalemates
Small world
Frustrated expectations
Envy, racism, nationalism
Ban-the-bomb movements
West has ancien regime morale.
Social order vs. social justice

We assume that the above lists are essentially self-explanatory.
If the reader has any difficulty with any of the items, he might skim
pages 381-392 of the Crisis Report,[2] which discusses earlier versions of
these lists. Some of the strategic implications are also spelled out
there.

We continue now with a number of themes which are more or less con-
sistent with the above observations and extrapolations, but which can be
used for the selection or design of specific worlds, i.e., any one of
these themes could characterize a major morphological aspect of a future
world. Most of these themes (but not all) can be blended together to
form interesting combinations. The sixteen themes are:

1. <u>Mostly Peaceful and Prosperous</u> (a_i): Worlds characterized by:
growing disinterest in aggression, sustained economic growth, polycentrism
or disunity in the blocs, and S.U.-U.S. "detente."

2. <u>Many Structural Stresses</u> (β_i): Something between a "violent"
Alpha World and a "serene" Gamma-Delta combination (see below), much
sound, but little fury, except nascent and potential--i.e., many inter-
and intra-bloc crisis and strains which could escalate.

---

[2]HI-180-RR, for ISA.

3. <u>Extensive Multipolarity</u> (γ_i): Quasi restoration of the old-fashioned nation-state great power system. Many of these worlds exhibit some degree of nuclear diffusion.

4. <u>Containment and Confrontation</u> (δ_i): Back to 1947-1953. A head-on collision between the two blocs, whose internal unity has been to a greater or lesser degree restored.

5. <u>Communism on the March</u> (ϵ_i): The nightmare of the late '40's and early '50's. The unity and morale of the Communist bloc is restored, but not the Western bloc. The Communists are on a successful offensive and have many successes; the West is in retreat or on the defense.

6. <u>Decline of Soviet Power</u> (ζ_i): Containment is an unexpected success; the Soviets either lose their morale and vigor, start to disintegrate, or otherwise slide backwards.

7. <u>Challenges from Europe</u> (η_i):

    a) A united European Political Community (EPC) which, against our wishes, pursues a very aggressive policy vs. the Soviet Union or with respect to the satellites.

    b) An EPC expanding Southward--for example one which has regained the traditional respect of the North Africans and Arabs for Europeans and is now re-establishing political and economic domination over Africa, both North and South of the Sahara, and has replaced the American presence in the Middle East.

    c) A full or partial return of nationalism to Europe. Once more war is thinkable among such nations as the U.K., France, Germany, Italy, Poland, Yugoslavia, Bulgaria, etc.

    d) Any of the above with a charismatic leader and more of a mass movement.

8. <u>Challenges from Japan</u> (θ_i):

    a) A charismatic leader takes over in Japan and tries to assume the leadership of Asia.

    b) A weak Japan which turns against the West.

    c) A Sino-Japanese alliance--perhaps with some technological breakthroughs as in the Mu Worlds (number 12 below).

    d) A Japanese-Indonesian alliance that looks partly like an anti-Chinese coalition and partly like a plot to divide Southeast Asia.

9. <u>Challenges from China</u> (ι_i):

   a) China achieves a number of breakthroughs in the area of military technology.

   b) China discovers a method of getting "free" calories. All of a sudden less than one-fourth of the Chinese population needs to work in agriculture.

   c) China becomes the world-wide leader of a left-wing, colored, racist movement.

   d) All of the above with a charismatic leader

   e) Refuses to accept the "white man's" arms control agreements (see Xi World number 14 below)

10. <u>Challenges from Latin America</u> (k_i):

   a) A large Latin American country goes Communist (or at least "Jacobin" left).

   b) A large conventional or civil war in Latin America. Intervention by outsiders.

   c) An LAPC (Latin American Political Community) is formed, is very successful; and begins to expand. It obtains nuclear weapons and...

   d) An aggressive charismatic leader comes to the fore.

11. <u>Challenges from other Underdeveloped Nations</u> (λ_i):

   a) Some degree of world depression which is reflected in a cataclysmic drop in raw material prices and a greatly magnified economic downturn in many underdeveloped nations.

   b) Indonesia (with or without Chinese aid) goes rampant.

   c) A successful Pan-Arab movement arises. It reaches out toward or includes North Africa and the Middle East-- becomes allied with Pakistan and Indonesia and through Pakistan to China. This gives rise, world-wide, to intense "anti-colonial" behavior.

   d) Any of the above with aggressive "colored" charismatic leader.

12. <u>Challenges from Technology</u> (μ_i): Major breakthroughs in the following areas:

   a) Birth and death control
   b) Calories

    c)   Energy

    d)   Education and Training

    e)   Information processing

    f)   Weather (prediction and control)

    g)   Communication and transportation

    h)   Weaponry (including chemical and bacteriological)

13.   <u>Major Realignments</u> (γ_i):   See pages 99 to 100.

14.   <u>Successful Arms Control</u> (ξ_i):

    a)   U.S. and S.U. have implicit or explicit agreement to have an MFD policy with about 50-200 missiles.

    b)   Same but with ACD instead of MFD

    c)   Large number of specific agreements are negotiated: exchange of observers, nuclear free areas, no first use of nuclear weapons, a condominium against first use by others, no first strike against cities, etc.

    d)   A treaty initiating the first stage of a GCD (General and Complete Disarmament) agreement is signed.

    15.   <u>Gallois-Khrushchev-Millis-Other-Non-War</u> (o_i):   Worlds in which there is little or no threat of international war. In Gallois worlds this occurs because everybody has nuclear weapons (of course, once in a while two small nations blow each other up thus warning others to be careful). In Krhushchev's view peace is maintained by prudence. As he said in his January 1961 speech:

> The task is to create impassable obstacles against the unleashing of wars by imperialists. We possess increasing possibilities for placing obstacles in the path of the warmongers. Consequently, we can forstall the outbreak of a world war....
>
> A word or two about local wars. A lot is being said nowadays in the imperialist camp about local wars, and they are even making small caliber atomic weapons for use in such wars; a special theory of local wars has been concocted. Is this fortuitous? Of course not....
>
> There have been local wars and they may occur again in the future, but opportunities for imperialists to unleash these wars too are becoming fewer and fewer. A small imperialist war, regardless of which imperialist begins it, may grow into a world thermonuclear rocket war. We must therefore combat both world wars and local wars....
>
> Now a word about national liberation wars....Liberation wars will continue to exist as long as imperialism exists, as colonialism exists. These are revolutionary wars. Such wars are not only admissible but inevitable....

Millis depends on agonistic restrictions to prevent war. "Other" could
include such things as a world-wide pluralistic security community, a
basic change in system (Pi world), universally successful use of passive-
resistance, change in human nature, etc. In all the above there is
internal war: violence, terror, raid, ambush, assassination, etc., but
all pretty peaceful as compared to today's potentialities.

16. Basic Change in International System (π_l): See pages 93 to 95
for discussion.

Each of the above themes is associated with a greek letter so that we
can conveniently have variations on the same theme: Alpha-1, Alpha-2,
Alpha-3, and so on. There is no attempt to be exhaustive or systematic
or even to have the themes on comparable levels of abstraction or aggre-
gation. The themes were chosen for their heuristic value to analysts
and to emphasize interesting problems.

The ESD report contains a discussion of twenty-three versions of the
above models (Alpha-1, Alpha-2, Beta-1, Beta-2, Gamma-1, etc.). We have
included in Appendix III of this report the Alpha-1, Beta-1, Gamma-1,
Delta-1, and Epsilon-1 versions because we will need them as a context
for some of the later discussion. We will give here some of the high
points from these world futures. (See also discussion on pages 271-274.)

Alpha-1 ("Mostly Peaceful and Prosperous")

1. U.S.S.R. is relatively rich, relatively relaxed, ideo-
        logically discouraged, highly deterred
2. Western Europe is united (including Britain), growing fast
3. China is growing slack
4. Japan is vigorous, armed--a stabilizing force in Asia
5. Third areas relatively calm, achieving moderate growth rates
6. U.S., U.S.S.R., Western Europe, announce a no-first-use of
        nuclear weapons policy

Beta-1 ("Many Structural Stresses")

1. U.S.S.R. is relatively rich, deterred, discouraged, losing
        dominance over world Communist movement
2. Peking competing vigorously for allegiance of bloc members,
        Asian Communist parties; has low-grade nuclear force
3. Britain excluded from E.E.C.; the six pursue moderately
        anti-American, exclusionist policy discriminating against
        U.S. exports to Europe and compete for trade in third
        areas; have sophisticated, independent, nuclear force
4. Japan developing independent nuclear deterrent in response
        to Chinese threat--other Asiatic countries worried
5. Third areas non-Communist, but poor, discouraged; some
        hysterical political movements (Castros, Congos, Nkrumahs)

Gamma-1 ("Extensive Multipolarity")

1. Accelerated arms race; rapid diffusion of nuclear weapons systems
2. U.S. uses nuclear weapons in 1966 to close passes on Indo-China border--later reduces foreign expenditures (to close foreign-exchange gap) by sharing nuclear weapons technology; gives nuclear weapons to Japan, India, Formosa, Australia, Turkey; China sells low-kiloton weapons to Indonesia; France sells kiloton bombs to Israel; Britain revives independent deterrent
3. U.S.S.R. increasingly deterred, shifting attention to Chinese threat
4. Third areas unstable, mutually hostile

Delta-1 ("Containment and Confrontation")

1. Trend to disintegration of blocs reversed
2. Soviet thrust in Berlin revives NATO, western cohesion; Moscow regains international prestige, ascendency over China
3. Western Europe accepts integrated NATO nuclear force, abandons independent deterrent
4. Heightened cold war competition in third areas

Epsilon-1 ("Communism on the March")

1. U.S.S.R. has seized West Berlin, signed East German peace treaty, threatens Iran, Afghanistan; once again dominates China
2. Laos, South Viet Nam have fallen to Communists; Cambodia teetering
3. Japan neutralist, anti-American, hysterical; India, Indonesia, Burma sign tri-partite "nonaggression" pacts with U.S.S.R., China
4. Western European Union strained; economic growth flagging; some revival of Communist voting strength in France, Italy, Benelux
5. NATO conventional forces underequipped, understaffed; NATO nuclear force hampered by European dissension, wishful thinking

Syncretic Approach: As described earlier, in this approach we start with an interesting problem or situation and then try to see how this situation might have arisen out of today's world. In a sense we try to describe a "least implausible" scenario connecting today with the particular interesting tomorrow that we wish to study; if necessary modifying the situation to some degree to make the scenario less implausible, so long as this can be done without too much change in focus from the problem we wish to study.

Suppose, for example, we wish to examine the problems of a major conventional war between the United States and a South American nation. The most obvious contender, simply because of its size, is Brazil. But Brazil and the U.S. are friendly. How then can we start the war? We have to change either Brazil or the U.S. Since we are studying potential problems for the U.S. as it is likely to be, we make most of the changes in Brazil. We will not change, for example, the "fact" that inhabitants of Brazil will be speaking Portuguese in 1985 and that they will have a GNP between 25 and 50 billion dollars and will number between 100 and 150 million. But we will assume that Brazil had: a stable government for the next decade--sustained high growth--large influx of technicians and scientists from Europe--an aggressive government coming into power--some dangerous saber-rattling--a war, revolution, or civil war, and finally, U.S. intervention.

It is clear if this "syncretizing" is carried far enough to create a very plausible scenario then one will have created a world which, in principle, could have been generated by the extrapolative technique. In practice it might not have been generated because it might not have occurred to the expert to try to extrapolate those particular trends in the particular directions that the syncretist was forced to go in order to make his synthesis.

It is useful to have available prepared "not-unreasonable" building blocks--mostly simple extrapolations of those current factors and trends which are, in fact, very firm. The table below gives some "reasonable" projections for the future of eight of the most important possible actors. All together these potential actors have 2/3 of the world's population and 9/10 of its production. (W.E.U. means, of course, Western European Union: the amalgamation of England with Germany, France, Italy and Benelux.)

Projections 1973, 1983, 2003 A.D.
(for Some Potential Great Powers)

Year / Power	Population (Millions)			GNP (Billions)			GNP Per Capita ($)		
	1973	83	03	1973	83	03	1973	83	03
U.S.A. I	225	266	372	773	1038	1876	3436	3902	5043
II				851	1259	2760	3782	4733	7419
U.S.S.R. I	267	316	442	449	732	1943	1682	2316	4396
II				494	885	2838	1850	2801	6421
W.E.U.	250	274	327	458	678	1485	1832	2479	4541
Japan	106	118	144	114	296	785	1075	2508	5451
China	867	1016	1396	101	164	436	110	145	320
India	555	689	1063	62	102	269	112	147	254
Indonesia	128	161	253	19	25	81	148	155	320
Brazil	108	151	293	49	97	212	454	642	724
TOTAL I	2506	2991	4290	2025	3132	7087	808	1047	1652
II	2506	2991	4290	2148	3506	8866	857	1172	2067
WORLD I	3800	4600	6600	2250	3500	8000	590	760	1210
II	3800	4600	6600	2400	3900	10,000	630	850	1510

The above table was constructed in a very simple-minded fashion by starting
from current figures as given in the table below and then extrapolating,
using in a simple, naive fashion the growth rates indicated in the right-
hand columns.

Assumptions -- 1963 Status

	Population (Millions)	~GNP (Billion $)	~GNP/ Capita (In $)	Growth Rates Assumed Population %	GNP %
U.S.A. I II	190	575	3026	1.7	3.0 (1963-2003) 4.0 (1963-2003)
U.S.S.R. I II	226	276	1221	1.7	5.0 (1963-2003) 6.0 (1963-2003)
W.E.U.	229	309	1349	0.9	4.0
Japan	96	44	458	1.0	10.0 (1963-1983) 5.0 (1983-2003)
China	740	62	84	1.6	5.0
India	446	38	85	2.2	5.0
Indonesia	102	14	137	2.3	3.0 (1963-1983) 6.0 (1983-2003)
Brazil	78	25	321	3.4	7.0 (1963-1983) 4.0 (1983-2003)
Total	2107	1343	637		
World Total	3200	1500	469	1.8	4.0

However, the numbers do not disagree too greatly with some examples of
more reasonable extrapolations that have been done in a sophisticated
fashion. We will not try to justify these numbers here.

It should be clear that the above projections will be useful in the
extrapolative approach, too. The difference, of course, is that the ex-
trapolative technique makes much greater use of much more detailed ex-
trapolations at the very beginning of the process than does the syncretic
technique.

One potentially useful application of the syncretic technique (or
possibly some of the others as well) would be to try to get some orien-
tation about long-term possibilities (i.e., four or five decades). We

discuss in the Crisis Report[3] the extreme importance of having a sense
of long-term direction and destination if one is to deal with some of
the problems that may arise in the future, particularly with crises and
wars. One way to acquire such a sense is to study directions and desti-
nations, particularly the latter. The next chart indicates some of the
possibilities for one of the most important factors, the role of war at
the beginning of the Twenty-First Century.

War in the Twenty-First Century

1. Minor modification of current system (Beta-Gamma Worlds)

2. All-out war system withered away (Omicron Worlds)
   a. Rule of law
   b. Pluralistic security community
   c. Rule of fait accompli (internal war)
   d. Instrumental wars (rational self-interest restraints)
   e. Agonistic wars (limited by absolute rules)
   f. Potlatch wars (some of the activities in space, foreign
      aid, "showy" military systems, etc.)
   g. Other substitute for central war

3. Elimination or control of weapons of mass destruction by:
   a. Agreement
   b. Revulsion
   c. Large setback to civilization (Armageddon?)

4. Other basic change in system (Pi Worlds)
   a. Bloc systems (with restraints and rituals)
   b. Community sanctions
   c. Condominiums (U.S.-S.U.?, collective security?, U.N.?)
   d. Concert of (large or small) powers (security council
      or assembly?)
   e. "World government"
   f. World empire (or empires)
   g. Disarmed, but "uncontrolled" nations
   h. Some degree of setback to civilization

The chart has four major headings, the first a minor modification of the
current system; i.e., the nation-state system is more or less maintained
even though this implies that we have some extreme form--at least poten-
tially--of a nuclear-armed Gamma World, e.g., 12,500-mile range mis-
siles, complete with warheads, are available to any of 100 nations for a
fraction of a million dollars; Doomsday Machines, or Near Doomsday
Machines, have come down in price to a fraction of a billion dollars,
and so on. In this world peace is still maintained by threats of war,
foreign policy is still furthered by threats of war, and possibly wars
actually occur.

---

[3]See "Summary of Recommendations from Crises and Arms Control,"
HI-288-RR, September 9, 1963, pp. 8-19 and 64-66.

What makes this a syncretic approach is the widely held belief that one cannot put this new wine (technology) into old bottles. As the late John von Neumann put it (June 1955, _Fortune_):

> 'The great globe itself' is in a rapidly maturing crisis--a crisis attributable to the fact that the environment in which technological progress must occur has become both undersized and underorganized...
>
> In the first half of this century the accelerating industrial revolution encountered an absolute limitation-- not on technological progress as such, but on an essential safety factor. This safety factor...was essentially a matter of geographical and political _Lebensraum_: an ever broader geographical scope for technological activities, combined with an ever broader political integration of the world. Within this expanding framework it was possible to accommodate the major tensions created by technological progress.
>
> Now this safety mechanism is being sharply inhibited; literally and figuratively, we are running out of room. At long last, we begin to feel the effects of the finite, actual size of the earth in a critical way.
>
> Thus the crisis does not arise from accidental events or human errors. It is inherent in technology's relation to geography on the one hand and to political organization on the other...In the years between now and 1980 the crisis will probably develop far beyond all earlier patterns. When or how it will end--or to what state of affairs it will yield--nobody can say.

The second broad division assumes that somehow the all-out war system has disappeared. Seven possibilities that might play a role in such a disappearance are listed. These possibilities are not necessarily incompatible with one another. A number of them could be operative at the same time.

The third possibility is self-explanatory. Finally, the fourth possibility, a basic change in the system, is considered. Eight possi- bilities are listed for this eventuality. All of the possibilities are interesting and people's attitudes towards them are equally interesting. We will discuss this last point briefly in Chapter XI. There will be an extensive discussion of all the possibilities on the chart in the forth- coming Martin-Marietta reports. We simply note here that it is of value to get some feeling for the plausibility and desirability of various long-term trends, of what kinds of things we think we really want to work for and what kinds of things we might, by appropriate policies, avoid. One way to do this would be to investigate what the worlds would look like in which the above possibilities had been realized. Or what the role and position of the United States would be if some basic changes

occurred in this system. Just what the current nation-state system
would look like in a world in which every nation could buy missiles with
warheads and other strange and esoteric weapon systems for a fraction of
a million dollars; or just how international relations would be conducted
in a world in which the threat of war was no longer available as the
ultimate resort. It should be noted, that although the 21st century is
a long time away, if some of the above tendencies came to be realized,
they would be likely to appear substantially earlier. Some of them
could actually make demands upon our weapons systems in the next decade
or two; hence it might be desirable to have their possibility affect
current R&D programs. After we have drawn up this world future we might
ask "How did we get there?" Eight possibilities are listed below.

1.	Natural evolution	
2.	Aided evolution	"Peacefully"
3.	Negotiation	
4.	Crises and small wars	
5.	"Controlled" wars	
6.	Uncontrolled but "successful" wars	"Violently"
7.	"Unsuccessful" wars	
8.	"Armageddons"	

When one glances at the above possibilities, one knows that it is most
unlikely that only the first three will play a role. Yet possibilities
4 through 8 tend to be ignored, particularly in the West (less in the
East, and in the Communist bloc not at all. There they have a theory
which comes straight from Marx and has been amply verified by events
that war and revolutions are the mid-wives of history. We would like
to modify that theory here a little bit to make it wars, crises, and
revolutions.) It is quite difficult for many people in the West to
study scenarios involving 4 through 8 as instruments of social and polit-
ical change--particularly, it is difficult for us to study them from an
expedient point of view--that is, how we can use crises and wars, if they
occur, to further our desires and to prevent them from being used against
us. A study of how to use a crisis or a war is too close to a study of
the preventive (i.e., planned) use of crises or wars; all of which as
is discussed in Chapter X are extremely unpleasant subjects for Ameri-
cans. However we feel the necessity for such studies is so obvious that
we need only note it here and not use further space trying to justify
them.

     We should probably add that we are not asserting that wars and
crises are the most important instruments of social and political change.
The analogy of the mid-wife is a good one. The mid-wife does not make
the baby, she does not even determine its genetic constitution. However,
her skill may be quite important for the future of the baby and what she
does or does not do can make all the difference in certain cases. There
is some discussion of all of the above chart in Crises and Arms Control.
And as mentioned there will be somewhat more in the Martin-Marietta reports.

Morphological: We will consider here only an abstract-analytical version in which important structural variables are either identified or defined. These variables are partly chosen to isolate and specify those factors of the future that are mostly likely to be of significance in a strategic analysis. The variables that are chosen determine the class of structure that can be studied. Specifying the variables, then, selects a particular structure. Because this method is somewhat more complicated than the syncretic and because an extensive discussion of the extrapolative technique is available in the ESD report, complete with examples, we will have a somewhat lengthier discussion here of this morphological method than of the other two. There is no corresponding implication that greater attention should be paid to it by the researcher, the other methods are often simpler and easier to use, and in combination or hybrid approaches can be very creative.

The abstract, analytical morphological approach is both naive and sophisticated. In this approach (as in the syncretic) the analyst at first reserves judgment--to some reasonable degree--as to what is likely and unlikely. He wishes to find the factors of variation in the world, their ranges, and the patterns of factors which might conceivably make a difference for strategic planning. In contrast to the more usual techniques of the expert (who may have built up a back-log of reasons for excluding certain parts of the range or who may be blinded by old experience from giving adequate weight to new aspects, such as the importance of the unlikely), the abstract worlds created by this approach are not as restricted by plausibility conditions and often may be easily criticized for their apparent superficiality. Indeed, this approach almost demands some ignorance and some childishness, or at least a willingness to suspend disbelief. Of course, as the investigation proceeds, there is increasing reliance on empirical evidence and the narrower interests of decision-makers, and many of the seemingly implausible and irrelevant aspects of the worlds are either dropped or modified. Thus, even though they begin at different points, the several modes of analysis will surely tend to converge, though some will inevitably be better than others for selecting certain aspects of reality.

Taking, then, this abstract approach, let us ask ourselves what the interesting factors might be. It is obvious that we are interested in relative force levels, the usability of these, the relative power and influence of the Soviets and ourselves in various areas and whether the world appears dangerous and threatening for whatever reason. However, one would also want, in a comprehensive list, to ask those questions which would be important not only to a relatively narrow strategic selection process, but would be determinative for a somewhat broader range of National Security Issues as in the BNSP discussion in Chapter III. Each person will have his own list of variables, but the overlap will be considerable. In fact, one suspects that most of the differences among lists will be due to the subsuming of one analyst's questions in those of another, or vice versa, i.e., in the level of aggregation (or analysis) at which the questions are being asked.

Let us then discuss the chief variables of probable significance to United States military-political policy planning for the seventies. The table below indicates a typical set and also a useful form.

WORLD FUTURE VARIABLES

Factor in World Future	Change in or value of Variable	Notes
A. General Features		
1. Multipolarity		
a. Nuclear		
b. Political-Economic		
2. Major Realignments		
3. Political-Economic Success in Non-Industrialized Areas		
4. Powers of International Organizations		
5. Arms Limitations		
6. War-Dangerous Confrontations		
7. War-Dangerous Non-Confrontations		
8. Minor Nuclear Diffusion		
9. Credibility of Nuclear Use		
B. U.S. Position		
10. Military-Economic Strength of U.S. Relative to World		
a. Nuclear		
b. Conventional Forces		
c. Military-Economic Potential		
11. Military-Economic Strength of U.S. and "Firm" Allies Relative to World		
a. Nuclear Forces		
b. Conventional Forces		
c. Military-Economic Potential		
12. U.S. Internationalism		
C. Bloc Comparisons		
13. Internal Cohesion of States		
a. Communist States		
b. U.S. and Allied States		
c. Third Bloc(s) States		
14. Unity of Blocs		
a. Communist		
b. U.S. and Allies		
c. Third Bloc (or blocs)		
15. Aggressiveness of Blocs (or their members)		
a. Communist		
b. U.S. and Allies		
c. Third Bloc (or blocs)		
16. Ideological and Cultural Successes of Blocs		
a. Communist		
b. U.S. and Allies		
c. Third Bloc (or blocs)		
D. Special Dangers or Opportunities		
17.		

It should be clear that not all the variables are independent--indeed, one of the chief objectives of any investigation is to study or rationalize the degree of interdependence. This means that not all combinations are possible, any combinations picked out will have to be rationalized in one way or another.

We will tentatively "quantify" these variables by a simple scaling device. Obviously, any system of notation may be used for such "quantification," but for present purposes the relative level of each variable may be indicated by the following range of symbols: (+++), (++), (+), (+/-), (-), (--), (---), (0), and (II). (+++) indicates an extreme value or change from some given base point, (++) indicates a large value or change and (+) indicates a significant value or change. (+/-) indicates an average or mixed situation, while (-), (--), and (---) indicate the other side of the scale. (0) indicates disinterest or irrelevance, and (II) means that conditions vary widely within the variable considered. In the discussion below, unless otherwise stated, we are now assumed to be at point (+/-) on most variables, in terms of the 1963 situation. Let us consider each of the above variables.

1. Multipolarity

Is the world-wide political-military situation dominated by one independent power or bloc (unipolarity), two (bipolarity), three or more (multipolarity)? Dominance includes relative all-around political and economic strength as well as the vague judgments of the world. "Dominance" probably assumes by the '70's some nuclear capability (unless there is broad arms control). The possibility of dominance being maintained without nuclear ability should, however, not be entirely dismissed (i.e., the Chinese might have only minimal nuclear abilities and yet be effectively dominant in the Asiatic area; the same applies to the European Political Community (EPC).) The concept of multipolarity overlaps with the concept of polycentrism which may exist within a power bloc. Multipolarity is also closely related to the possible development of militarily significant "third blocs."

Marking the multipolarity variable (+) would presumably imply something like relative independence of either Europe (or a part thereof), Japan, or China or two or three of these powers and that it or they were acting assertively or a relatively large increase in the assertiveness of the other powers. (++) would imply 3 or 4 more or less equal superpowers or much nuclear diffusion among the smaller powers, and (+++) would mean a pre-World War I or World War II kind of nationalism.

2. Major Realignments

It is now clear that the Communist--non-Communist cleavage in its present form is not likely to be the only strategic problem for the '70's and '80's. At present we see a possible breakup within the two great blocs, while the years from 1933-39 illustrate the speed with which power may be developed, given an adequate industrial and technical base. Presumably the "quantification" of this variable should indicate not only

the extent of the realignment but the strength of the realigning powers.
This is one category, however, for which the note may be more important
than the symbol. Some possibilities are listed below.

Ad-Hoc Working Arrangements (+)

U.S.-S.U. vs. Nth Countries (or new Castros)
Paris-Peking vs. U.S.-S.U.
U.S.-China vs. S.U.
Sino-Indonesia vs. S.E. Asia
China-X (in Latin America) vs. U.S. or OAS
China-X (in Africa) vs. U.N., U.S., S.A., or European Power

Conceivable (++) Realignments

All of the above, but as firm alliances
China-Japan working arrangement (vs. U.S., S.U., or
    S. and S.E. Asia)
Islamic Arab Community or unified alliance (vs. Euro-
    peans or Africa)
France-Germany (assertive alliance) (vs.?...)
Other European Grouping (vs.?...)
Latin American Grouping (vs. U.S. or other Latin American
    group)

Conceivable (+++) Realignments

China-Japan alliance (vs. U.S.)
Russia-Germany (vs. "NATO" or China)
China-India (vs. "colonial" powers)
Sino-Soviet (with extensive Soviet aid
    to China)

Conceivable "Universal" Dichotomies (++++)

United Capitalist vs. United Communist
White vs. Colored
Developed vs. Underdeveloped
Atlantic Community vs. Asia
Dualistic vs. Monistic Philosophies

These realignment possibilities should be considered in the light of
the contexts and potentialities suggested on pages 84 to 85 and page 93.
The first on the list is really no longer a suggestion--i.e., it has ef-
fectively existed since the signing of the test ban--at least for the
time being. The Nth countries suggested will doubtless include, to some
extent, China and France. Therefore, following the old political rule
that the enemy of my enemy is my friend and the opponent of my opponent
is a potential working ally, we suggest the possibility of a working
agreement between Paris and Peking--no doubt a very limited and tenta-
tive one--but still a real possibility. The next one, though substantially
less likely, is by the same rule not inconceivable if the Sino-Soviet split
widens into a chasm and the current U.S.-S.U. detente cools off. The next

three are, of course, completely plausible events in the next decade or
so. We will not comment on the more or less classical possibilities in
the next two sets nor on the horror scenarios raised by the last set
except to suggest that the union on the left (the capitalist, white,
developed, Atlantic, dualistic nations, i.e., NATO) might yet be con-
fronted, to some degree or other, by the union on the left (Communist,
colored, underdeveloped, Asiatic, monistic countries, i.e., China plus
some Asiatic allies).

3.   Political-Economic Success in Non-Industrialized Areas

The standard here of success would be the attaining of a slightly
more satisfactory relationship between levels of expectation and levels
of production or political development than is currently the case in most
non-industrialized nations. A (+) success might be the development of a
stable basis for expansion. A (++) success would indicate the achieve-
ment of a higher order of internal unity, public order and the legitimi-
zation of the system. Finally, a (+++) success would mean many nations
entering the early phases of the "take-off" stage.

4.   Powers of International Organizations

If world peace through formal world organization is to be obtained
there must, almost by definition, be success here. For strategic purposes
we are particularly interested in the possible role and effectiveness of
international police forces. If the variable were marked (+), the routine
operation of such forces would be somewhat more significant than today--
i.e., clearly capable of handling small crises in non-industrialized areas
and some minor crises in industrialized areas--even over local opposition.
(++) would mean ability of international forces to play an important or
crucial part in major confrontations. (+++) would imply that, at least
under normal conditions, the international forces were the dominant
military power.

5.   Arms Limitations Effectiveness

Arms limitations are limited to those obtained either through agree-
ment or reciprocated unilateral action, or jointly desired unilateral ac-
tions. As stated, we take today's rather complex situation as (+/-). Any
of the agreements indicated in the discussion of Zeta worlds would make it
(+) or (++). (+++) would indicate a functioning world government or rule
of law.

6.   War-Dangerous Bloc Confrontations

This is a judgment of the danger which the confrontation of major
power blocs presents. One would imagine a war-dangerous confrontation
situation would be substantially more serious than the situation of the
Fall of 1963, which is a medium (+/-) to (-) situation. We judge the Cuban
situation to be worth (+) rather than (++) (at least as long as the Soviets
did not combine any European issues such as Berlin or Turkey with the crisis).
Using the escalation ladder on pages 22 and 23 as a rough measuring stick,
we can roughly, and perhaps occasionally misleadingly, make the following

correlations: (+/-) rungs 1-3, (+) rungs 4-9, (++) rungs 10-25, (+++)
rungs 26-31, and perhaps a (++++) for rungs 32-44. A situation is con-
sidered to have been war-dangerous even if the actual response were not
to escalate but to accept heavy political losses without war. Of course,
if the accommodation (appeasement) works, the situation is no longer
war-dangerous.

7. War-Dangerous Non-Confrontation Situations

These situations might involve European problems, such as that of
German reunification, if the great powers were attempting to control
their respective parties (assuming Germany not to be a great power). The
second chief variety would be a non-European power struggle in which the
great powers were initially bystanders. Such problems might arise from
general failure in non-industrialized areas under conditions of rising
expectations, social strife, extreme leadership, etc. Worlds Beta, Gamma,
Kappa, and Lambda tend to be potential examples. If the current situation
is (+/-), then we might take a stepped up invasion of India by China, or an
Arab-Israeli war, or a war between South Africa and other African states as
(+), large-scale fighting with opposing blocs intervening, including logistics
and a few volunteers as (++), and a situation in which threats or "ultimatums"
were being parried or direct interference with each other's support as (+++).

8. Minor Nuclear Diffusion

As indicated above "multipolarity" includes a certain amount of iden-
tification of nuclear ability with great power status. But the world would
look very different if many relatively minor states, here and there, pos-
sessed nuclear weapons, or were about to possess them. As indicated in
the note on page 111, just time alone will do this. A (+) would imply, say,
India, Sweden, Switzerland, and/or Canada, a (++) might add Israel, Indo-
nesia, Japan, Brazil, etc. (+++) is as in Gamma-1 World (see Appendix III).

9. Credibility of Nuclear Use

Credibility is related to doctrine, arms levels and vulnerability.
As the diagram on pages 22 and 23 indicates, nuclear use is today consid-
ered to be far up on the escalation ladder. It is also judged a very high
threshold to cross even if we come to it. This could change. By the '70's
and '80's the state of the nuclear threshold will be dependent to a great
extent on the history of the interim of use or serious threat of use and
by whom and against whom. (See Gamma World in Appendix III.) Credibility
then involves relative strengths of deterrence forces or the invulnerabil-
ity of deterrence forces and the attitudes decision-makers take toward
these factors. Low credibility reduces fear, yet in a crisis it may mean
that the defender is less able to deter a war.

10. Military-Economic Strength of U.S. Relative to the World

Force levels and force potentials are here directly considered.
Categories 10 and 11 are the only cases where the weightings are rela-
tive, one bloc to the rest, and not relative to 1963. If the U.S. has
what are considered to be exploitable advantages in either conventional

or nuclear forces or imminent military-economic potentiality for such
forces, while other forces are stalemated, then this entry is rated (+).
If no such advantages are judged to exist, forces are (+/-). Authorities
would differ today as to what is, in fact, the case, although it is prob-
ably (+/-) to (+). To be more precise one should differentiate among nu-
clear advantage, conventional advantage, and military-economic potential.
This latter assumes that a mobilization base exists for quickly overmatch-
ing in one or the other arms area. For nuclear advantage we may wish to
note "tactical" or "strategic," and describe the first-strike position.
For conventional forces we may wish to indicate where geographically the
superiority or inferiority lies.

11. Military-Economic Strength of U.S. and "Firm" Allies Relative to the World

See 10 above. By firm allies we mean not so much those nations in
formal alliances as those which we believe would take active part with us
in situations in which they can be reasonably assumed to be involved.

12. U.S. Internationalism

There has been in recent years a growing tendency, even among liberal
intellectuals, to wonder if we have not overcommitted ourselves interna-
tionally. Therefore, internationalism in U.S. politics may go on the de-
fensive and be submerged, at least until we are dramatically faced with a
stark new problem. Whether the future is one of harsh struggle or peace-
ful development, the degree of U.S. involvement would seem to be an im-
portant causative and planning factor.

13. Internal Cohesion of Various Important States or Blocs

This is a measure of such things as the degree to which successful
growth rates and internal stability has been maintained along with general
satisfaction in the several countries of the blocs. This is not a measure
of internal bloc unity. We are presently assumed to be on the plus side
of internal strength, while Communist states are (+) or (+/-), depending
upon the importance attached to the East European states.

14. Unity of Blocs

This is a measure of the extent to which countries identified as a
bloc are unified in their policies, especially international policies.
There will always tend to be twilight countries at the edge of blocs which
may be excluded or included to change the result. Therefore, criteria of
"membership" need to be included. Unity of the U.S. and its allies is now
judged (by definition) to be (+/-) but likely to be (-), while for the Com-
munists it is currently (-) and going rapidly in the direction of (--).
If the Sino-Soviet bloc breaks up, then we will have to define three blocs--
the old NATO, the Warsaw Pact, and a third, the Sino-Asiatic, bloc[4] and talk
about the unity of each.

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[4]The "third bloc" may be Communist or capitalist or neither, but its
existence is based on a criterion different from that of the bipolar world
of the '50's. Such a bloc or blocs may of course never come into existence.
The category may remain blank.

15. Aggressiveness of Blocs (or Their Members) or Important States

Aggressiveness is not necessarily indicative of a war-dangerous situation, but where several blocs or states are aggressive, or even one is excessively so, dangers are likely. Nor does aggressiveness mean strength or unity, as China has indicated (at least verbally).

16. Ideological and Cultural Success

We are interested in the way in which the several blocs feel they are progressing in the struggle of ideas and influence, and indeed whether they feel this struggle is any longer of great significance. The symbol (0) is used to indicate prevailing disinterest. It is important here to make provision for new ideologies or sub-ideologies which come to inspire large groups of people jaded by past controversies.

17. Special Dangers and Opportunities

For each world the reader is to ask himself what its dangers and opportunities are in his opinion. Here the constructing analyst can provide some suggestions for that judgment by specifying likely parameters or variations as he sees them. He may point out: surprise attack potential, irrationally fearful leadership, the use of nuclear weapons is incredible to all but the South Africans, and so on. (Each individual writes his own from numbers 17 forward.)

Analysis and Discussion of the Variables

The variables as given tend to be projected summaries of conclusions to which policy-makers in the early '70's may come in judging their world. The analyst, having posed a world in which such judgments are likely to be made, must next proceed to an examination of the individual variables and their interdependencies. First he would want to know much more about individual variables. For example, if there were a condition of relative U.S. and allied military-economic nuclear inferiority the analyst would want to know: 1) What the the main lines of the argument that supports the inferiority hypothesis (e.g., what force ratios are involved and why are these meaningful)? 2) Where and how and under what conditions might the Communist superiority be brought into play? 3) Is the superiority likely to lead to threats or use? It will be noticed that while some of these questions are refinements of variables (10) and (11), others involve relating these variables to the whole context.

Another variable asks about the credibility of nuclear use. We might then apply the syncretic approach and ask, "What has been the history of nuclear use in the preceding 10-15 years?" Similarly, instead of saying under (10) and (11) that there is an assumed exploitable advantage to the forces of one side in a certain future world, one might now wish to spell out the source of the advantage--e.g., 2,000 hard missiles to 200, high reliability to low, etc. Such an elaboration of the (+)'s and (-)'s of course multiply the relevant possibilities, whether done for syncretic

or illustrative reasons. There will also be less shared understanding or agreement on the consequences of these detailed descriptions than of the meaning of the conclusionary statement. In particular it will not be clear on what basis certain judgments (e.g., credibility) will be made by the 1970's. But all of this is inevitable if the variables are to be useful to those of different analytical and policy persuasions. To some extent each individual must put his own content into each statement he makes as to the sign of the variable (e.g., that there is ideological retreat, advance, or growing disinterest) and the rest of the analytic community must suspend judgment until the analysis is finished. However, to the extent that one wishes to use such morphological variables to standardize or make more comparable or precise various worlds there will have to be some agreement on such relations.

We must turn as we analyze the separate variables back toward reliance on empirical intuition, yet the abstract system helps to formulate the questions for which it can offer no answers. It suggests at least 16 questions as to reasonably probable and/or significant ranges for variables over the next 10-15 years. Is it reasonable to suppose, for example, that there will be little military-political meaning to the Communist-non-Communist dichotomy by 1975? Next we would ask how interdependent the variables are under various conditions. We are particularly interested in the degree to which "war-dangerous" is a function of the variation of other factors. Certainly some dependency exists, and yet one can make a case that there is considerable independence left in this variable even after "aggressiveness" and "nuclear credibility" have been specified for all ranges of these variables.

Closely related to the last questions is that of the limits on combination which may be established. Or another way to say the same thing is to ask "What ranges of worlds are we disinterested in?" Such a question, however, also raises the issue of how disinterested we can reasonably be in the "desirable" tendencies of variables. Can we be seriously interested in policy opportunities as well as dangers? Is there a way to really alter political-military policy to exploit positive tendencies? We will defer discussion of all these questions to Part II.

A Discussion of Nth Country Problems

Before terminating this chapter on world futures it seems worthwhile
to make some brief summary remarks on Nth country problems in general and
some possibilities for Europe in particular. Separate reports are being
prepared which will greatly amplify the material presented here.

A systematic discussion of any particular Nth country would go much
like our discussion of U.S. strategic problems; that is, we would define
something like the seven levels of analysis for each area of interest or
relevance to the Nth country and then apply the BNSP approach, discussing
each level or area systematically and their interrelations for various
proposed strategies. We will truncate the discussion sharply. First we
will concentrate on the "nuclear war" area. Then, starting with the
seventh level, let us simply assume that the country has the capacity and
resources to acquire all the elements of a nuclear capability--perhaps by
some combination of purchase and production. We will pass over the analy-
sis of Level Six with a simple assumption that the country can, in fact,
synthesize these elements into an efficient operating force (i.e., it has
the required capabilities in terms of basing, manning, command and control,
and so on). Different capabilities, of course, will make great differences,
but we will not here make this part of the analysis very explicit. Going
on to Level Five, let us now examine the purposes, requirements, and cri-
teria that these forces might have and the kinds of basic tactics they
would need to meet these purposes. We list below a dozen possibilities:

1. Routine use as a quality weapons system
2. To implement a muddle-through (thoughtfully or blindly) policy
3. To implement some implicit or explicit committal strategy
4. Controlled response tactics
5. To implement a pre-emptive accommodation (or surrender) policy
6. To implement a preventive accommodation (or surrender) policy
7. Unintegrated alliance response
8. Integrated alliance response
9. First-strike threats (implicit or explicit)
10. Limited strategic retaliation
11. Covert or anonymous delivery (threat of or actual)
12. Covert or anonymous use (threat of or actual)

Most of the above entries are self-explanatory, but we will make some
comments on them anyway. The first and least likely possibility is that
the country will simply use the nuclear weapons as routinely as it would
use, say, a rifle or a tank. This does not mean, of course, that it would
use nuclear weapons in a minor street disturbance. One does not use tanks
or even rifles in minor street disturbances. It simply means than when
on a cost-effectiveness basis (where cost is ordinarily construed to mean
basically dollars or other (physical) opportunity costs) that whenever the
nuclear weapons seem appropriate then the country goes ahead and uses them.
A startling number of decision-makers in and out of the services have
thought in these terms, but the number of such individuals seems to be

getting smaller with every year that passes. It is clear that most of the
world, including responsible decision-makers, think of nuclear weapons as
something different, and are very glad that there seems to be a pretty
precise dividing line between them and conventional weapons and further
have no interest in the technical possibilities for blurring this dividing
line.[5]

Somewhat more likely is the possibility that the country will simply
adopt a muddling-through policy, that is, it will not really care very
much how it's going to use nuclear weapons. It may have bought the weapons
for reasons (see discussion on page 109) that have nothing to do with the
immediate possibility of actual use or even potential use. Or it may argue
that if it ever gets into some kind of a tight situation when it wants to
use the weapons, it will invent some tactic as is necessary. This last
policy should not be derided. Almost all of the sophisticated and subtle
tactics that we will discuss in Chapters VIII, IX, and XI are not really
esoteric. If a country has the capability, it is almost certain to invent
an appropriate tactic under the pressure of a very specific necessity (a
much simpler intellectual feat than trying to think through a large range
of hypothetical situations, even if each one separately is simple once
one has suspended disbelief). As always, the reason for discussing these
possibilities ahead of time is simply to be able to plan the muddling
through. Muddling-through policies need not be blind--they can be thought-
ful and have some of their disadvantages alleviated; that is, the main pur-
pose of the force in a muddling-through policy is simply to exist so that
when some unexpected political-military objective calls upon it to be used,
it should be there. However, it often needs capabilities that have to be
designed ahead of time if it is to fulfill most of the possible political-
military objectives.

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[5]The editor of this report is always shocked in talking to some mem-
bers of the armed services or certain civilian scientists with how per-
versely they miss the above point. He does not mean by this that the
above point is necessarily correct. These individuals, who on the whole
are inclined to think of nuclear weapons as simply another quality system,
may in fact turn out to be right, either because it is historically inevit-
able or because in fact it is desirable. What the editor objects to is
that even when these individuals try to persuade others who feel very
strongly, even emotionally, about the importance of the dividing line,
that actually the use of "nuclears" is desirable, they often use as an
argument the fact that one can make nuclear weapons smaller than high-
explosive weapons, that the dividing line can, by suitable policies, be
blurred. This is equivalent to going to the head of a female seminary,
who is extremely concerned about the chastity of his wards, and telling
him that he can alleviate some of the effects of a lack of chastity by
distributing contraceptives, or that one has worked out quite innocuous
methods of seduction. The head of the seminary will presumably have only
an apprehensive interest in these particular theoretical points. He will
not be persuaded to relax his vigilance; most likely the contrary will occur.

The third policy on the list is that the Nth country will have some rationality-of-irrationality strategy at the political-military level and it is the purpose of the force to implement the committal. Probably the easiest way to do this is to decentralize the control in such a way so that if the other side commits the provocation that is supposed to trigger the committal, the local military commander has the right to go ahead and use the weapons. Local military commanders being what they are, this system has some degree of credibility. Indeed, it is too credible, and also may be accident-prone. Given the likely consequences of such an act, particularly if the opponent is one of the great powers, the Nth country may not desire to be that committed; it may wish to have some degree of control over its reactions, even if this reduces the credibility of a response in the face of large or devastating counterthreats. Thus, in point of fact, the committal policy is quite likely to be some kind of facade, and the country is much more likely to implement a tactic corresponding to 5 and 6 below, as will be discussed in a moment. However, it should also be noted (as will be further discussed) that the Nth country may not need much credibility. Assuming that it declares itself ahead of time to be committed to some rationality-of-irrationality tactic, then though the aggressor country which it will attack if provoked may be able to make a devastating counterattack, this aggressor country might still be deterred from committing provocation if the estimated damage that would be done by the Nth country in its attack is so great that even a small probability of its occurring would be very deterring. (Of course, the above rule can be made to work both ways.)

If an Nth nuclear power or alliance is to follow committal policy, probably the most reasonable such policy is some form of controlled response tactic or limited strategic retaliation. Let us discuss controlled response tactic first. In this particular Controlled Response strategy the armed services are given standing orders (i.e., a firing doctrine) that they are to reply to any nuclear attacks on their country (or alliance) with a tit-for-tat response some fixed number of hours later against the offending country. (It would probably be desirable for the commanding general's orders to include instructions, which may or may not be public, that he is to under-escalate rather than match the provocation so that there can be no question of an upward spiral arising out of simple ambiguities or misunderstandings in the tit-for-tat equation.) There will, of course, have to be available some method of overriding the Commander-in-Chief's orders. In the case of a single country this could be a committee composed of representatives of government, the opposition, and some distinguished neutral figures. In the case of the alliance, this might be a committee of representatives of some of the major powers. Either committee would require some majority--say two-thirds or three-quarters--that could, in a crisis, give the commanding general different orders. But unless they had agreed on these different orders within some fixed time limit of the commanding general's query, he would be required to go ahead and fire according to the previously approved doctrine--even if he didn't hear from them at all (e.g. the system has a small element of fail dangerous about it in order to simplify command and control and vulnerability problems).

It is plausible that in many cases it ought to be possible to get a
single government or even a group of allied governments to agree ahead of
time to such a doctrine. Compared to any other committal policy, this is
likely to be judged relatively defensive, prudent, and sufficiently credi-
ble--at least in normal times when there is no crisis and the contingency
seems quite remote and easily deterred. Indeed, in most circumstances it
does not seem implausible that even during a very stark and intense crisis
any group or country would be able to negate the orders, even if the ag-
gressor made some very impressive threats. Such a controlled response
strategy might be of special value for a multilateral European force. We
will discuss the details of this suggestion in a separate report. How-
ever, we particularly note here that such a controlled response strategy
has great advantages over strategies which rely (implicitly or explicitly)
on the next two tactics, Pre-emptive Accommodation or Preventive Accommo-
dation. The Pre-emptive Accommodation tactic is used when enough credible
tactical information has been received that the other side has committed
itself to launch an attack or has attacked. The tactic then is to pre-
empt, not, however, by attacking but by holding back the forces and accom-
modating to whatever extent is necessary to prevent the attack from being
launched or continued. The Preventive Accommodation tactic is not really
a military tactic but purely political. It is used when one feels that it
is too dangerous to wait until the other side's buttons are actually pressed
or orders have been given to press them. It accommodates during a crisis
or at least sufficiently ahead of time so that great risks are not run.[6]

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[6] It should be realized that, to some great extent, the above are the
implicit and in some cases explicit tactics of the Europeans, at least up
until a few months ago. With the exception of John Strachey and Raymond
Aron, the editor of this report has never met any Europeans who could en-
visage their country's surviving an all-out nuclear war in which they were
a major target, and if they are members of the NATO alliance they could not
imagine an all-out nuclear war in which they were not major targets. Both
notions could be wrong, particularly if the war were conducted as a no-city
war or as mostly a no-city war as envisaged in the current U.S. Controlled
Response Doctrine (see note on the bottom of page 14 and Gamma-1 scenario
in Chapter VI, pages 145 to 147). But at least until a few months ago prac-
tically nobody in Europe had taken this possibility seriously, and, in
fact, very few do now. Furthermore, very few Europeans believe that a na-
tion can justifiably commit suicide or initiate actions which will lead to
its total extinction or even watch passively if events are occurring which
have a high probability of resulting in such extinction. Thus when this
writer was in Europe, he talked informally with a number of Europeans and
in each case conjectured that the strategy of their country was something
between pre-emptive and preventive surrender. (The word surrender, not ac-
commodation, was deliberately used in order to make the choice starker--
actually many Europeans who have thought about this possibility tend to be-
lieve either that some limited accommodation would work or advocate some
form of passive or active civilian resistance as a last resort.) The con-
jecture was not contradicted by any of these Europeans. However, most of
them did not think that this was necessarily a serious matter. They do not

The only military requirements are that the force look like it might be needed--if only to trigger off a large war.

We will not discuss the rest of the tactics, but pass on to Level Four. Let us now discuss what the political-military objectives might be for an Nth country. The following list is reasonably standard (in fact, at various times various Frenchmen have mentioned every single item):

      1. Prestige and status
      2. Quality weapons for national defense
      3. A prudent precaution (a flexible base)
      4. Proportional deterrence (tear an arm off)
      5. Deterrence by uncertainty (or threshold)
      6. Add strength to alliance (prevent miscalculation)
      7. Further wartime national objectives
      8. Survive the war sanctuary
      9. Neutrality preserving
    10. Trigger alliance
    11. Vote in alliance or negotiations
    12. Technology, knowledge, and experience
    13. Blackmail and coercion (pro or con)

We should probably start by noting that actually Objective 3 also affects Levels Six and Seven directly and Objective 12 would also be considered in an analysis of Level Seven. We will comment here only on Objectives 4 and 5.

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feel that the Soviets felt any great desires or pressures to attack Europe and that, in addition, the Soviets could clearly not be certain that the pre-emptive or preventive surrender would be carried through in time, either because the U.S. would not allow it or because the government would not, in fact, change the official policy or for any of hundreds of other reasons. They felt the fact that the Soviets could not be sure would be sufficient deterrent to prevent them from trying any probes serious enough to raise the realistic specter of the need for pre-emptive or preventive accommodation, much less surrender. The editor tends to agree with the analysis of his European friends. However, we will discuss in the next section that the policy can still be undesirable even if it is likely to work.

This is why the editor believes that it is important to raise these unpleasant problems now, during an era of relative calm and atmosphere of detente--raise them, perhaps, as dramatically and seriously as one can (which, given the likely apathy, is not going to be very dramatically or seriously). In this atmosphere there is likely to be very little dis-utility in raising the question (if one is afraid to talk about it, one is certainly not equipped to be very firm in a crisis) and also sufficient time to think about and institute corrective actions. In particular, the editor would like to suggest that some variation of the controlled response tactics and strategy suggested previously might well fulfill all necessary European political-military objectives.

"Proportional deterrence" is the notion that a small power does not need as high quality a deterrent as, say, the United States. The kinds of stakes which arise in any conflict between it and the Soviet Union or other potential attacker are not likely to be so great that it would need as overwhelming or certain a threat to deter its opponent as the U.S. might need to deter the Soviets in its potential confrontations with that power.

"Deterrence by uncertainty" simply means that if a country has a reasonably prudent government then that government is not likely to risk an all-out thermonuclear war or even a small one, even though the odds were, say, nine to one in its favor that it could get away unscathed. Even one chance out of ten of extensive thermonuclear damage is too great a risk to take.

Again, we tend to agree with both of these evaluations, at least for almost all the governments currently in power. But we do think it important to note that nine-to-one odds for a total success have historically been considered quite good. One can imagine many adventurous governments being willing to risk a great deal on so favorable a ratio. Also deterrence by uncertainty has other disadvantages. We indicated in the previous section that such policies tend to rely--implicitly or explicitly--on pre-emptive or preventive accommodation tactics. There are at least three circumstances in which pre-emptive or preventive accommodation policies tend to work out badly:

1. If there is a very intense crisis in which harsh or stark choices may be raised. The assurance of the Europeans is likely at that point to vanish completely.

2. If there is a systematic debate on national security policy. Of course, the Europeans do not expect any such debate, but if there is one, then the policies are not likely to be politically palatable. Actually, everybody realizes this so that all who are anxious not to rock a seemingly leaky and unstable boat agree not to have a debate. This itself can be a serious source of later problems.

3. If deterrence actually fails. The policies can then lead to either excessive accommodation, surrender, or an extremely destructive war and one that is probably unnecessarily destructive.

Of course, just looking at the objectives for acquiring nuclear weapons will not settle the question. In practice there are many pros and cons which will influence the governments concerned. The table on the next page indicates some of these pros and cons in addition to the ones we have already discussed.

We do not expect much nuclear diffusion during the Decade, in spite of the many objectives that can be served by acquiring nuclear weapons and in spite of the fact that the raw materials for nuclear weapons systems will be widely available.

Some Influences For and Against Nuclear Diffusion

CON:

A Prudent Fear of Diffusion--of Rocking the Boat
   (Levels 1-3)
A Prudent Fear of Counter-Actions (Levels 3 & 4)
Political, Social, and Moral Pressures & Sanctions
   (Levels 1-3 or 7)
Economic and Technological Limitations (Level 7)
Influence of the Great Powers (Level 3)
Influence of World "Public Opinion" (Levels 1-3)
Belief that Simple Weapons Systems are Ineffec-
   tive (Level 3)
Belief that Nuclear Weapons Systems are Ineffec-
   tive (Level 3)
Belief that Nuclear Weapons Compete Too Much with
   HE Systems (Levels 6 or 7)

PRO:

Belief that Simple Nuclear Weapons Systems are
   Useful (Level 3 or Level 4 as just discussed)
An Identification of Nuclear Weapons with Great
   Power Status and Freedom of Action (Levels 1-
   3 or 7)
Increasing Availability of Reactors Suitable for
   Breeding (Level 7)[7]
Increasing Cheapness and Simplicity of Simple
   Missile Systems (Levels 6 & 7)
Collapse of Great Powers' Nuclear Monopoly (Levels
   6 & 7)
Domino or Reaction Effects (Levels 1-3, 6 or 7)
Deliberate Great Power Distribution (Levels 1-3,
   6 or 7)

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[7]It has been estimated (private communication from John Menke of United
Nuclear Corporation) that there will be installed in the "Free World" enough
nuclear electric generating capacity to make possible the following plutonium
production in Kg per year (numbers in parentheses are estimated as most
probable amounts).

	1965	1970	1980
England	800-1400 (1000)	2500-5200 (2500)	6000-13,000 (7500)
Euratom	400-500 (500)	1600-2200 (2000)	16,000-22,000 (20,000)
Other Europe		400-800 (500)	2000-3200 (2500)
U.S.A.	400	2000-5000 (2500)	16,000-100,000 (45,000)
Canada		400-1000 (500)	2000-5000 (2500)
Japan		400-1000 (500)	2800-9000 (3000)
Elsewhere in Free World			1200-3000 (1500)

We need only add that it does not take many Kg's to make a weapon.

Again, the above table is mostly self-explanatory (in any case, an
extensive discussion of the points will be available in the forthcoming
report on Nth country problems), so we will make only a few brief com-
ments. In the 9th and 11th lines, the term ineffective may simply mean
technically ineffective (i.e., inadequacy at Level Six such as vulnera-
bility, command and control or penetration problems) or politically in-
effective (i.e., problems at Levels One-Four because the weapons are
either self-deterring or deterred by fear of sanctions). The first com-
ment under the PRO list, "Belief that Simple Nuclear Weapons Systems are
Useful," is simply supposed to remind the reader that we have just dis-
cussed 13 possible political-military objectives for an Nth country, any
one of which the country might feel is worth enough to balance the various
kinds of costs involved in acquiring a nuclear system. It is very diffi-
cult to balance the pros and cons on the above table, but most analysts
seem to believe that the cons will outweigh the pros. (It should now be
clear to a reader how a more systematic treatment of these Nth country
problems would involve an extensive discussion at each of the seven levels
of analysis for all the likely contenders--a discussion which would shed
much light on the issues and even make us wiser, yet possibly not justify
us in making a much firmer prediction.)

European Futures

Let us now consider, very briefly, some various possibilities for
Europe. We list first some phrases describing some outstanding morpho-
logical characteristics. These correspond (in the methodological sense)
to the set of themes which we listed for the world futures on pages 85-89.
The dominating morphological characteristics could be a:

> U.S.-Dominated NATO
> NATO of "Equals" (U.S., England, France,
>   Germany, ----?)
> Atlantic Community
> WEU (England plus the Six) version of EEC or EPC
> Franco-German EEC (European Economic Community)
> Franco-German EPC (European Political Community)
> Equal Half of Unified NATO (Dumbbell Concept)
> Community Deterrent
> Europe of Fatherlands
> European Security Community
> Reunited Germany

The first four on the list correspond quite closely to varying versions
of the "grand design," none of which, at least in the near future, seems
likely of accomplishment. It is probable that any one of these four pos-
sibilities could have been achieved if there had been sufficiently aggres-
sive leadership and energy put into the attempt by the proper people in
the United States or England (but see page 72 for reason why U.S. domina-
tion is unlikely, in the long run). In particular, it seems quite plausible
that almost any time before 1957 if the British had tried to, they could

have successfully taken the lead in forming first a European economic
community and then a European political community. For many reasons they
did not desire to do so, and one judges they have lost that opportunity,
at least for the time being.

The next two possibilities (Franco-German dominated EEC or EPC) were
also quite plausible, at least as long as Adenauer was in charge in West
Germany. The reason why a Franco-German EEC followed by a Franco-German
EPC seemed plausible was because many important and influential Germans,
probably including Adenauer, did not really trust the German people. They
were anxious to create a European system in which legitimate German aspir-
ations could be satisfied but in which potentially dangerous or undesirable
aspirations would be effectively controlled.[8] Thus, it seems to be a plaus-
ible conjecture that if the United States had been willing to acquiesce or
even to further French leadership in Europe, that a much stronger Franco-
German alliance could have been formed and that none of the other nations
in the EEC would have opposed this leadership even if it went as far as
creating a European political community that, at least temporarily, did
not include the British. One can also conjecture that some form of this
possibility is in the back of de Gaulle's mind; i.e., that he is hopeful
that France will play some role in uniting Europe that is intermediate
between that played by Prussia in uniting Germany and by Piedmont in unit-
ing Italy. In the long run, the fact that the initial impulse and energy
came from a particular country may not be of supreme importance, but at
least in the short run it can make all the difference as to the character
of the resulting community and the elite which runs it. We comment
briefly on the rest of the list.

The notion of a community deterrent, of course, is consistent with
a large number of political arrangements, but it in itself would be an
extremely important political factor, particularly if it looked like an
effective deterrent (perhaps because it used the controlled response tac-
tics described previously). It is also possible that Europe will simply
return to some form of the nation-state system, perhaps with a higher de-
gree of inter-nation cooperation than was typical before World War II.
This is one possible form of the "Europe of the Fatherlands" which
de Gaulle talks about. It is very likely that this would be a European
Security Community (i.e., the thought of war between European nations
would become unthinkable in the same sense that the thought of war be-
tween the United States and Canada is unthinkable). One event which
could hinder further unification of Europe would be the reunification of
Germany. This would give Germany about 75 million inhabitants as opposed
to about 50 million for France, England, and Italy. Its GNP would likely
be larger than that of France and Italy combined and more than 50% greater
than England's. It is difficult to believe that such a reunited Germany

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[8] If you were some variety of Democrat and lived in Germany during the
years 1933-1945 you tended in that 13-year period to acquire some distrust
of your countrymen. While one can exaggerate the importance of these feel-
ings, it seems quite clear that many senior Germans still have them.

would be an acceptable member of any European political community, simply
because of the enormous influence which it would almost inevitably come
to have in that community.

The reader will recognize that the above very cursory discussion of
some European possibilities was very much in the spirit of the extrapola-
tive technique; we did not attempt to get very far from customary paths.

Conclusion

Strategic analysis operates against the background of a future en-
vironment, much of which is predictable and yet will not be predicted and
some of which is unforeseeable. In this more or less unforeseen environ-
ment there is a major emphasis on implausible eventualities. Rationally
and in terms of what empirical intuitions we may have, we must more or
less arbitrarily cut up the broad maze of future possibilities into op-
erable segments or abstractions. Two attempts to handle this problem have
been scenarios and war games.

In the course of attempting to understand the strategic debate we
have developed sketches of several different possible future situations
against which to consider alternative central war options. Among other
things we have tried to see these sketches as particular patterns of
variables, so that we may be more critically aware of the intuitions (or
biases) which guide our selection of certain variables over others. We
believe we have developed a flexible system for the generation and crit-
icism of future contexts. Any particular context and its variants may
then be used for the generation and variation of setting for scenarios,
war games, or more precise or richer projections of particular aspects
of the whole. These scenarios, games, or specific projections can then
be used to improve the context.

<u>A PARADIGM FOR THE</u>
<u>1965-1975 STRATEGIC DEBATE</u>

PART II: "The Seven Levels of Analysis"

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A PARADIGM FOR THE 1965-1975 STRATEGIC DEBATE

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CHAPTER VI

INTRODUCTORY COMMENTS TO PART II

In Part II of this report we would like to go through each of the
seven levels of analysis in enough detail so that their use and place will
be clear. We cannot, of course, cover the lower levels such as Five, Six,
and Seven systematically, since by their very nature these involve detailed
considerations and any serious discussion of them would be voluminous. How-
ever, the report on Alternative Central War Postures and Tactics and some
of the civil defense reports constitute a separate (classified) discussion
of some topics at Levels Five and Six. These reports will use the terminol-
ogy and structure of the paradigm set forth in Part I and can thus be con-
sidered to be part of this report. As for Levels One to Three we will
select issues of special relevance to the subject of Central War or when
it seems to us that discussion will be of special use. This last usually
occurs because the particular subject tends to be underemphasized in most
discussions of Central War Strategy.

We will introduce the whole of Part II with two discussions which can
be thought of as introductory comments; the first will use a simple model
to illustrate and explain some important deterrence and war-fighting con-
cepts; the second contains "standardized" scenarios that can serve as a con-
text or instance for some of the considerations in Chapters VII to XI.

These two discussions emphasize some important concepts that are
involved whenever the large-scale use of the thermonuclear weapons is
risked or threatened. While the discussion will center on interactions
between Level Four (political-military objectives) and Level Five (pur-
poses, requirements, and criteria), we are not trying to pre-empt the dis-
cussions of Chapters IX and XI, but only to motivate and clarify the dis-
cussion in Chapters VII-IX and give examples of the "methodology."

"Analytic" Treatment of Political-Military Objectives[1]

The simplified models we will use do not necessarily reflect many
aspects of reality and are not offered as descriptions of the world as it
is, or as it will necessarily be (though the world might be like these
models under some circumstances).[2] As always, they are intended to prod

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[1]This section is a revision of some material in Chapter IV (Strategic
Analysis) of Crises and Arms Control.

[2]In using quantitative analytic models, it is important to keep in
mind the reasons for stipulating precise figures. In this case we do not
use numbers to indicate that we have done careful empirical work and have
made important substantive estimates, though some of the numbers are based
on informal discussions with U.S. decision-makers. We are using numbers
here simply as an aid to communication. That is, instead of using such
statements as "a little," "a lot," "many," or "most," we are giving quanti-
tative measures of what these adjectives mean to the man who is using them
(see discussion on page 73).

thinking, to stimulate and provoke, to be simple illustrations of areas
that it would be fruitful to study in detail. Because they are simple
and stark, they force one to think through and accept new ideas. Through
them one can define language, formulate concepts, and discuss and empha-
size some elementary principles more clearly and unemotionally than by
taking complex examples from the real world. In particular, it is diffi-
cult to discuss what role resolve and rationality might play in deterrence
and war unless one first has some idea of what is or is not rational con-
duct under various assumptions.

Of course, it would be a mistake to transfer thoughtlessly the lessons
learned from such models to more complicated and realistic problems. But
it is better to take the risk that such models may be misused than forego
attempts to develop a clear understanding of at least some parts of the
problem. By developing a sure understanding of the simple, we can have
some hope of understanding the more complex considerations to which these
simple models are introductory. Let us now consider the simple model:

Table I

THE BASIC MODEL

Fixed

Two countries, P and Q
Each has 200 cities
Each has a total population of 100,000,000
No one lives outside the cities
The population is distributed as follows:[3]

Class	Population (millions)	Number of Cities	ACC Cities	Accumulated Population
A	10	1	1	10
B	5	1	2	15
C	2.5	14	16	50
D	1.0	14	30	64
E	.5	30	60	79
F	.15	140	200	100

One missile can reliably destroy a city
Missile locations are known to both sides
There is adequate command and control
Completely flexible war plans

Varied

Number of missiles
Vulnerability of missiles
Civil defense preparations
Possibility of post attack coercion

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[3] As will be discussed later, the above corresponds roughly
to the distribution of population in large cities in the U.S.

The two countries in our model are called simply P and Q (rather than Red or Blue), because Red and Blue have connotations and we are trying to look clinically at the interactions between Levels Four and Five--between bargaining, threatening, and coercing in escalation situations and the purposes, requirements, and criteria of the central war forces--without discussing, on the one hand, possible differences in values, personalities, perceptions of the strategic situations, and, on the other hand, different physical postures, capabilities, and skills.

In our admittedly unrealistic model no one lives in the country, which is cultivated and harvested entirely by machinery. The only things besides the machine shops in the wide-open spaces are the missile bases. Attacks on the missiles will cause fallout difficulties for the cities but will not prevent agricultural recovery in the country. We assume that each country has missiles that are absolutely reliable, i.e., that always fire when the right button is pushed. Each one has a warhead sufficient to destroy completely any enemy city at which it is aimed. Thus many of the practical problems that a military force actually faces are ignored or assumed away. We do this because we wish to focus attention on just four important military variables: (1) the numbers of missiles, (2) the vulnerability of missiles, (3) the civil defense preparations, and (4) the possibility of postattack coercion.

Deterrence with Vulnerable Missiles (One Missile Destroys Two)

Table II illustrates the unprecedented situation of the fifties and early sixties, when the standard rule--that the offense needs a local advantage in numbers (usually between 3-to-1 and 7-to-1) before it can successfully attack--is no longer held. The chart assumes that the missiles are so clustered that one missile on the offense destroys two on the defense.[4]

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and very roughly to the S.U., where we have increased the population of S.U. cities by 50% in order to make the two comparable (see page 157). As can be seen, there are two super cities (corresponding to Moscow and Leningrad in the S.U. or New York and Los Angeles in the U.S.), 28 other large cities, 30 medium, and 140 small. The last two columns can be used to relate total fatalities to numbers of missiles launched so as to maximize the number killed (compare with page 185).

[4]Of course in the early fifties one bomber could have destroyed 90 planes on a 2 wing B-47 base and 30 planes on a B-36 base; today one missile might still destroy 15 to 45 planes.

Let us start by giving P and Q 1,000 missiles each--a theoretical overkill
by a factor of five since each country has only 200 cities. Despite this
overkill possibility the situation is unstable. By firing 500 missiles,
either side could completely destroy the other side's forces and still
have 500 missiles left with which to threaten or attack cities. Even
though each side has a first-strike overkill capability against the other
side's cities, neither has an overkill in terms of the balance of terror,
or, indeed, any second-strike (retaliatory) capability at all. This model
illustrates what could be called unstable deterrence. On paper, the side
that goes first wins the war unscathed.

TABLE II

Vulnerable Missiles

(One-for-Two Exchange Rate)

Number of Missiles		Additional Capabilities	Comments (Uncertain Interpretation)
P	Q		
1,000	1,000		Unstable Deterrence
1,002	1,002	Give each side 2 invulnerable missiles	Multistable Deterrence
1,002	1,002	Add fallout protection for P and Q	Controlled Counterforce Now Feasible
1,004	1,004	Give each side 2 more invulnerable missiles	Limited Exemplary Retaliation Now Likely
1,004	1,004	Add evacuation for P	Includes a Dangerous Option
1,016	1,004	Give P an additional 12 invulnerable missiles	Option Now More Usable
1,200	1,004	Add 184 more invulnerable missiles for P	Option Now Usable?

However, in the real world there will always be military imponder-
ables, as well as moral and political factors, to restrain a potential
attacker. Therefore, even though on these assumptions each side would
greatly prefer attacking to being attacked, both are still likely to pre-
fer peace to war--if there is a free choice between the two. Further,
because the balance of terror is so unstable, each side is likely to be
wary (deterred) of provoking the other. However, in case a provocative
act seemed necessary, one might choose to precede it by a disarming strike,
since such a strike might seem less dangerous than some provocations.
Further, if there is a crisis, each side is likely to be anxious to get
in the first blow indicating that both are likely to be trigger-happy.

In fact, this situation is likely to lead to what is called <u>recipro-
cal fear of surprise attack</u>. Suppose there is some crisis. Then P may
feel that Q wants to strike and that, therefore, it must either strike
first or be destroyed. Further, P will realize that Q knows that P is
thinking this way; indeed P will know that Q knows that P knows--and so
on <u>ad infinitum</u>. Both P & Q may then find themselves under an almost
irrestible pressure to pre-empt.

The instability created by an extreme first-strike advantage and
other consequences of the first-and-second-strike concept are easily re-
cognized. One could probably explain them to a child of ten. Yet it is
amusing (or horrifying) to note that it took almost 15 years from the end
of World War II for this concept to be reasonably well understood, even
though its importance was recognized as soon as the atom bomb was invented.
That is, even though almost all the postwar briefings began with the
statement that the other side had struck first, <u>the damage done by this
first strike was ignored in evaluating the subsequent course of events--
our performance was estimated as though our planes and bases were un-
touched</u>. Not until the early fifties did some of the analytical and theo-
retical groups see the full consequences of the potential vulnerability
of strategic forces; and not until the mid-fifties did the military es-
tablishments fully appreciate these effects. For example, until 1957 the
Navy had never studied an over-all map exercise in which their carriers
were struck first and the resulting <u>damaged</u> force was used in the evalu-
ation of the rest of the exercise.[5] It was not until the late fifties
that the general intellectual community began to understand the problem
fully, and it was only in 1960 that the Executive Office and Congress
clearly grasped these very elementary notions. One has only to read many
of the 1958-59 discussions concerning the role that our IRBM might play
in redressing the balance of Soviet superiority in rocket engine propul-
sion[6] to see that very few, if any, of the senior people understood how

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[5]U.S. Congress, Hearings of the Subcommittee on the Air Force of
the Committee on Armed Service, United States Senate, 1956, Vol. II,
pp. 1013-1014, quoted in <u>On Thermonuclear War</u>, pages 434 and 435.

[6]The notion was that they would have a range advantage because of
their greater propulsion, but we had the advantage of better geography
in our overseas bases.

vulnerable our overseas IRBM would be. To give another example, The New
York Times' treatment of balance of power situations seems not to have
included any reference to the differences between the first and second
strikes until 1959. Up to this point the pre-attack number of planes on
each side were counted and compared as though such--parade ground--com-
parisons alone were meaningful.

It is unlikely that it will take this long in the future for such
simple ideas as first and second strike to be widely understood, and their
consequences noted and acted on. But it is still startling to recall the
agonizing history of the gradual understanding of the full importance of
the difference between first strike and second strike.

Let us now change the model by giving each side 2 invulnerable mis-
siles. The attacker would then lose his two largest cities and 15 million
people as a result of striking first. This situation might be considered
as being multistable[7] since it affords some deterrence against great provo-
cation as well as against all-out attack. However, it is clear that many
small or moderate provocations are possible which will not destabilize the
situation, since even a "successful" outcome of the war still involves
15,000,000 swift, sure, and terrible deaths. This deterrent to going to
war is to some degree an advantage for those with an interest in (small)
provocations and a disadvantage for those who are provoked. Some form of
the above described multistable deterrence is a much better description
of the real world in the fifties than the usual analogy with the Western
gun duel where the man who fired first, and accurately, won. While this
analogy has been used by many analysts, it overstates the case and its use
has led to an overemphasis of the concept of stable deterrence.

However the multistable deterrence in the fifties and early sixties
was not symmetrical. The U.S. had a rather large and competent strategic
air force which regularly exercised in peacetime. It seems that the Soviets
had a much smaller strategic force which also had significant deficiencies
in range, capability and weapons. Furthermore, the Soviets did not train
this force very well in peacetime. As a result the U.S. had significantly
greater capability in all components of strategic air power.

Let us now give each side enough fallout protection so that cities
will not be bonus targets in a counterforce attack. At first sight, such
protection may seem irrelevant to the deterrence calculation since fallout
protection does not protect a city at which the missile is aimed; it simply
enables the missile systems and the city systems to be separated. That is,
if a missile is shot at another missile, the fallout from the nuclear weapon
will not necessarily kill people in the cities. Hence it would be possible
to have a missile-missile war without killing many civilians.

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[7]When the world "stable" is used to modify a deterrent situation, it
should be understood to have the connotation "tending to stability" rather
than the connotation of an absolute estimate. The common term "stable deter-
rence" should be understood as a political-military objective to promote sta-
bility against surprise attack and accidental war. The term "multistable
deterrence" covers the additional characteristic of stability against provo-
cation (see On Thermonuclear War, pages 141 to 144). Max Singer has used
the term "multiple nuclear balance" to mean much the same thing.

How does this change our previous considerations? It makes plausible, for the first time, that there may be city-avoidance wars, that intra-war deterrence may be used. We can now imagine three different "extreme possibilities" for the fourth variable mentioned on page 118, the possibility of postattack coercion. In the first, to be denoted by the term _automatic interpretation_, the retaliation of the defender to a first strike by the attacker is "swift and sure," all-out and punitive in nature. (In "real" life such a response could result from: anger, a preattack emphasis on deterrence as the sole objective, doctrinal lags, failures in command and control, motives not clearly understood by the defender, or some other factor.)

A second value for the state of the coercion variable assumes that, even after missiles have been used, it is still possible to put pressure on the adversary--to exchange threats and promises. We will refer to this as the _coercion_[8] interpretation. This theory assumes that P and Q will fight a controlled war--act in a way more or less appropriate to their strategic situations. Finally a third interpretation, referred to as the _uncertain_ interpretation, assumes that either the automatic or the coercion situation may occur.

If one now assumes the coercion interpretation, the situation seems almost as unstable as in the first case--or perhaps more. (A potential attacker will no longer be deterred by the prospect of large inevitable collateral damage to the "innocent" population of the defender.) P could now launch 500 missiles, destroy Q's 1,000 vulnerable missiles, and then, in the negotiations which follow, threaten total destruction from his 502 missiles against the loss of 2 super cities from Q's 2 undestroyed and invulnerable missiles. Of course, various kinds of difficulties may crop up in the negotiations. For example, Q may say, "Give me liberty or give me death," or give a convincing interpretation of an outraged madman who is almost insane with fury at being attacked. On the other hand, P is really dealing with an "establishment" and not with a single man with unlimited powers, so there may be limits to the asymmetries in resolve which can be developed by the defender.

If the uncertain interpretation is assumed, the situation might--even more than before--be called "multistable." On the one hand, the risk of automatic retaliation and the resultant loss of 2 super cities (15 million fatalities) is a serious enough deterrent to each side to discourage surprise attack, and on the other hand, each side would have to concede that

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[8]The phrase "postattack coercion" is chosen with some hesitation on several counts. It should cover any tacit or overt threats made _before_, _during_, or _after_ an attack to regulate behavior while the attack is in progress or thereafter, so that "postattack" is not quite proper. Also the coercion might be referred to as "blackmail" which, strictly speaking, it is not, or as "negotiation," which in some sense it is. The basic notion is usually the "restraint by threat of force" of the opponent's reply to an attack and this suggests the word "coercion." It is a version of our previously described "controlled war" (see note on page 14).

the other side might consider taking this risk if it were sufficiently provoked, so there is some stability against provocation as well.

There is also a third type of deterrence associated with this posture, which belongs lower on the escalation ladder.[9] If Q provoked P, P might deliberately and publicly try to increase the likelihood that, if war started, the coercion interpretation would prevail. He could do this by unilateral announcements that, if he struck, he would retaliate against five cities for each one of his that was destroyed by Q in retaliation for P's first strike. By attempting to establish such a convention he shows he is angry and is considering desperate action. This signal of his state of mind is itself deterring. In addition by making a first strike more likely to get off "scot-free" and hence more likely to occur he has increased his effective threats--at the cost, of course, of increasing simultaneously Q's threat. Even if Q does not make a similar threat, both sides will understand that P has studied such problems, made preparations to control his forces, and knows what to expect if he should lose either control of his forces or himself after being struck. This puts a premium on striking first as opposed to engaging in a provocative move. Thus P has made the situation more stable against provocations and less stable against first strikes for both sides, and reciprocal fears of surprise attack may arise. However, a desperate or provoked actor may desire to make the situation more hazardous--even if for both sides--by the introduction of chance devices, the upsetting of tacit understandings and other means. Therefore, P might try to deter Q from provocation by threatening to establish or by unilaterally establishing the ground rules that make a first strike more feasible. We will discuss this possibility further in Chapters IX and XI under the topic, "threatening inadvertent war."

Finally, if the model is interpreted as involving automatic retaliation, then the attacker would lose his 2 super cities and 15 million people as a result of striking first.

Thus, if retaliation is thought of as being done for revenge or out of anger, fallout protection for the side attacked might be thought of as reducing his pressure or motivation to retaliate. It also makes unilateral announcements of city avoidance strategies more plausible and more easily established. Indeed both sides have shown by ordering this capability that they take seriously the possibility of city survival. They have implicitly recognized the nature and possibility of city avoidance. Fallout protection may therefore reduce the stability against surprise attack, although it will reduce the damage if war occurs, and increase the stability against provocation. This is true even though one might expect the country pondering whether to strike first to be unlikely to be sufficiently certain that the coercion will work to be willing to risk an attack except under grave provocation or extreme pressures. But the lack of collateral damage does result in a tendency to expect coercion to be the likely final outcome, and increases the likelihood, if there is a war, of the attack being designed to minimize collateral civilian damage so as

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[9]See pp. 21 to 23.

to increase the probability of successful postattack coercion. A pruden-
tial or cautious potential provocateur is likely to give great weight to
this possibility.

Fallout protection also makes low-level "sanitary" counterforce ope-
rations somewhat more feasible and therefore may make them more likely.
That is, in a confrontation or crisis, either P or Q can fire one missile
and take out two of the enemy's. Under these circumstances, the balance
of power has not been changed, but one side has clearly indicated that it
is willing to escalate to larger operations, and the other side better
attack or accommodate. Stretching out the crisis has suddenly become too
dangerous.

Actually the balance of terror is not really firm enough for such a
tactic, but if we gave each side an additional 2 missiles then this one-
third increase in hostages (to 20,000,000) may make the difference. In
any case the addition of only 2 more missiles would make the deterrence
against provocation weaker, but strengthen the deterrence against surprise
attack. It does the latter by a number of effects:

1) The direct increase in the number of cities and people risked
    if coercion does not work.
2) The likely weakening of the final "peace treaty," because of
    the increased bargaining power of the defender if coercion
    does work.
3) The increase in the number of options available to the defender
    if he has 4 missiles surviving. For example, he can launch one
    or two of them at one or two of the attacker's small or medium
    sized cities and still hold two in reserve--one for each of the
    attackers super cities. Of course, the attacker may have
    threatened a 5 for 1 reprisal, but he may prefer settling at
    this point than carrying his counterthreat through--and in any
    case he has suffered the loss of at least two cities and in-
    creased risk of escalation.

Next, one could add an evacuation capability to one side or the
other, let us say P. This would be a dangerous option to use in the
coercion interpretation. First, since Q might think P's evacuation was
a prelude to a strike, he might consider the situation to be as follows:

1. If P strikes after evacu-   2. If I pre-empt (and the
    ation P will have 504   evacuation occurs anyway)
    missiles and 100 empty   P has 4 missiles and 100
    cities. I will have 4   empty cities. I have 504
    missiles. I would be   missiles. The negotiations
    coerced from retaliation.   are uncertain but do not
    P knows this also, so P   seem to indicate anyone's
    will, in fact, strike,   outright loss--certainly
    disarm me, and win. In   not mine.
    any case he can risk it
    because even if P's plans
    for coercion go wrong, he
    loses only 4 empty cities.

In this model, one would expect Q to pre-empt as a result.

If we interpret the model as requiring <u>automatic</u> retaliation, Q's reasoning might be:

1. If P strikes after evacuation and I then retaliate, he will have 504 missiles and 96 empty cities. He will have suffered substantial damage but he will have won.	2. If I pre-empt, I will lose 4 of my largest cities, but with my 504 missiles, I will have won.	3. If P evacuates and does not strike, a change in the negotiating environment in P's favor will have occurred. He will be much more willing to strike than I since he only loses 4 empty cities by such a strike.

It seems clear that this interpretation is less likely to lead to war than the previous one, but it is still very dangerous. Since Q's position after pre-emption is exactly what it would be if he attacked at any other period, one presumes that he does not want to "win" at this cost and would not attack as a result of consideration 2 alone. However, from his point of view, if he knew that P would attack or had a high probability of attacking, pre-emption might look very good in comparison. If, on the other hand, he does not believe that P would <u>ever</u> be willing to suffer the 4 empty cities' being damaged, which is automatic in this interpretation, then he has nothing to fear from the now only <u>apparent</u> edge in negotiating which P has gained. If Q does attack after a deterioration of the bargaining situation P will lose. Essentially then, P's evacuation is a net gain if:

1. P expects to appear both less afraid of going to war and more committed to "winning" the dispute, and thus to improve his bargaining position and further hopes that Q prefers settling on P's terms to pre-empting. If Q is not willing to settle soon then P hopes he does not appear so much less afraid or so committed as to convince Q to pre-empt;

2. P intends to attack only if the negotiating goes badly, in which case evacuation both makes successful negotiation more likely and cuts his losses if it is not (but he runs the risks associated with increased reciprocal fear of surprise attack during the deterioration of the bargaining); or

3. P intends to attack but believes correctly that Q will not believe this attack is sufficiently probable for a pre-emption by Q, despite the evacuation.

This model and the last two interpretations would seem to indicate that evacuation is extremely dangerous in a position in which there is strategic equality and a relatively low level of the balance of terror.

In the uncertain interpretation, other considerations would occur and, although it is difficult even to sketch the possibilities systematically, certain comments might be made. Q is now concerned with the possibility of coercion if he pre-empts during the evacuation. This seems less likely to be successful, because of the vulnerability of the population in transit. To the extent that he destroys people he tends to expect retaliation. He might therefore want either to pre-empt immediately or to wait until the evacuation had gone far enough so that fallout protection was again available.

After the evacuation is secured, P either attacks or has attacked and presumably he has a good chance of coercing Q from retaliating since his position is so much better--both objectively and publicly. Thus, so far, the vulnerability of P's population has produced an asymmetry in the situation which is in P's favor--his chance of coercion remains high while Q's decreased. While this situation will remain throughout the entire period of negotiations, the situation might be very unstable, at least in theory, since whoever goes first will "win" the war no matter where the population is. The winner can always exact retaliation for the defender's carelessness or punitive action. Therefore, in our model we might predict heightened probability of a war at some point in the evacuation or post-evacuation period. (Of course, these results have not been reached deductively but represent simply an abstract, but plausible, line of reasoning.)

In the last two cases of Table II, P backs up the evacuation with increasing numbers of invulnerable missiles. This decreases the premium to Q of striking first, and has contradictory effects which we describe separately:

Automatic Interpretation: Here Q is increasingly deterred from attacking by certain massive retaliation when P evacuates. On the other hand, as long as P is deterred by threat of losing 4 empty cities, Q's position in preattack negotiation is better than in the previous case, since his retaliation cannot be coerced. While Q cannot force a "win," he can force "mutual suicide" if he goes first and has some deterrent capability, so he does not certainly lose and may reach a bargain if P prefers peace to winning with such losses. Q can improve his position by appearing stupid and irrational and liable to impulses. Under these circumstances P would have to consider the possibility that an evacuation would trigger off a suicidal and irrational attack by Q.

Coercion Interpretation: In this case, exactly the opposite is true. Q is anxious to avoid negotiation and anticipates a likely attack from P, whose overwhelming superiority makes coercion easy with or without evacuation. Q's tendency to pre-empt increases by this measure while the advantages he can expect from postattack bargaining decrease as P's retaliatory power increases. Still, one might expect that if Q went first and won the opportunity to threaten 100 empty cities he could not be forced simply to surrender in the arrangements that followed.

Uncertain Interpretation: Q's decisions in the two previous inter-
pretations must be weighed with the probability of their occurrence and
the losses to be expected if they do occur. P's increasing ability to
destroy Q completely makes even a small possibility of automatic retali-
ation look very bad. On the other hand, where one course involved out-
right loss, some individuals will gamble. How much governments gamble
is difficult to say, but it seems clear that a situation in which a state
must choose between very desperate alternatives can be dangerous. In this
vein it might be preferable for P if Q had more invulnerable missiles so
that his position in later negotiations did not look so poor as to encour-
age a desperate choice. The mere complexity of the situation might result
in Q's reacting according to first impulses, i.e., attacking while P was
evacuating even though this was not a rational course of action.

One could, of course, study models with many other assumptions. For
example, in the Strategic Analysis Chapter (IV) of Crises and Arms Control
there is a discussion when the missiles

    1) exchange one for one
    2) exchange two for one
    3) are invulnerable

All are discussed for both symmetric and asymmetric cases. We believe
that there is much to learn from all of the above discussions, but we will
content ourselves here with looking at only the symmetrical invulnerable
case. There would now be no point in even attempting a counterforce oper-
ation since it would just be throwing one's missiles away. This assump-
tion of total invulnerability might hold if each side had Polaris subma-
rines and no antisubmarine capabilities or very "hard," hidden, or mobile
missiles. Many observers believe that, in effect, this situation either
exists now or soon will. This is not necessarily so. There may be large
first-strike advantages accruing to the attacker throughout the sixties
and possibly even longer. Nevertheless, a situation in which there is
effective invulnerability could occur, and since we now have some elements
of it, it is fruitful to examine this situation.

It is difficult to find a historical analogy to the situation in
which each side can strike at the other side's people and cities but can-
not strike at the other's weapons. This practically unprecedented mili-
tary situation will undoubtedly give rise to some unprecedented political
and strategic problems. Such a balance of terror is very different from
the Western gun duel. It is more like a situation in which each man has
a shotgun trained on the other man's wife and children, but not on his
opponent. The only approximate historical analogy would be the practice
in ancient times of exchanging hostages, such as the children of two rival
kings or emperors. Moreover, although in previous history military situ-
ations did occur in which it was possible--if it went far enough--for one
side to destroy the other totally, it has never--or almost never--been
possible for both sides simultanesouly to destroy each other's people and
property--each side being unable to interfere with the other's campaign.

TABLE III

Distinguishable Levels of Deterrence
(Deterrence with Invulnerable Missiles)

Level of Balance of Terror	Number of Invulnerable Missiles		Hostages
	P	Q	
Workable (Numbers)	1	1	10,000,000
Workable (Per Cent)	2	2	15,000,000
"Adequate"	6	6	25,000,000
"Reliable" (No alternative to Peace)	16	16	50,000,000
1/3 Survive	30	30	64,000,000
City Annihilation	60	60	79,000,000
Approaching Absolute (Mutual Homicide)	100-400	100-400	82-100,000,000
Near Absolute (Stark Mutual Homicide)	1,000	1,000	100,000,000

The chart above indicates that there might be eight distinguishable levels of deterrence. Many people distinguish only two. The number that is habitually distinguished will of course depend on the analyst--and the kind of problems he is working on. We believe that in practice, one can, reasonably objectively and usefully distinguish about five levels which we will label: (but not expect the reader to remember) workable, "adequate," "reliable," approaching absolute, and near absolute. Each will have its own characteristic range of individuals it visualizes deterring (in characteristic scenarios). Let us now consider each level in Table III.

We argue that in our model only one missile should be sufficient to deter in almost all reasonable circumstances. 10,000,000 dead used to be considered a heavy price to pay--in fact it is a larger number of fatalities than any belligerent lost due to direct action of the enemy in either World War I or World War II. In addition it involves the complete obliteration of the major city of the country, (e.g., Moscow, New York, London, Paris, etc.). In real life Moscow, London, and Paris are all more essential to their respective countries (economically, politically, culturally, etc.) than New York is to the U.S. Thus, at least in the automatic interpretation, the punishment is swift and severe with only one missile on a side.

Some analysts however might argue that populations are now larger and
that these things really should be calculated in per cents; so we indi-
cated that 2 missiles is also in the workable range.

In our model about 6 missiles will kill 25,000,000 people. We sug-
gest that this level deserves to be called "adequate." We feel that we
have to put the word in quotes, because countries may legitimately feel
that they need more, but we also feel that one should note that this is
both more people and higher per cent of the population than any country
has lost in a modern war. (Though the Soviets may have come close in
numbers--they are generally estimated to have lost between 20 and 25 mil-
lion people, due to all causes, in World War II.) If we go past this
point we are in new territory. And it is hard to imagine a foreign policy
issue over which the United States and the Soviet Union would risk 25
million people. Yet, living with a situation like this, both sides are
likely to forget how dangerous it is. We might then want to go up to say
16 missiles and 50 million hostages. We call this "reliable" and again
put it in quotes because it may not work. It looks reliable from the
engineering point of view. One would say that it is _probably_ reliable--
it should work; still, there is some small possibility that it won't.

The editor has pointed out elsewhere that if the number of hostages
in the U.S. were 60 million or 1/3 of the country there would be no vital
interest other than immediate survival for which the country would feel
justified in going to war.[10] He reached this conclusion after extensive
discussions in which people who thought they were willing to lose even
more over such issues as Berlin or the defense of Europe concluded they
would not be, and should not be, if the harsh choice were ever presented
starkly. We have already discussed in Chapter V, that such choices are
rarely presented in a stark fashion. We can still claim, however, that
in such a case, the phrase "no alternative to peace" (any kind of peace)
would be endorsed by almost everybody, at least superficially. However,
as we will explain later, in practice this phrase may really be translated
to "no alternative to all kinds of violence" with the ever present possi-
bility of all-out violence.

What effect would possessing 30 or 60 missiles have on the decision-
makers. On questions of war or peace--accommodation or risk taking--one
would judge relatively little over having 16. We are now counting the
number of medium sized cities (.5-1 million) that may be destroyed and
while these may make a great deal of difference to those who are making
recuperation calculations, the decision-maker is likely to be so stunned
by the prospect of losing all 16 major cities and so unfamiliar and dis-
trustful (perhaps correctly) of calculations that it is unlikely that
charts indicating appreciable differences in recovery and other postwar
prospects will make a difference. Yet the decision-maker might be willing
to spend some billions of dollars to save the people in Class D, E, and
F cities if that proved feasible even when one could not protect people
in Class A, B, and C cities.

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[10]_On Thermonuclear War_, pp. 27-36.

Let us now assume that both sides have something between 100 and 400 missiles--in substance, a "mutual homicide pact." We have deliberately made it 100 to 400. A mathematician might ask, why did we not stop at 200? There are only 200 cities, and one needs only 200 missiles, since each is absolutely reliable. If one side has 201, the extra one is wasted. There is nothing to shoot at--it's overkill. Four hundred would be an overkill by 100 per cent. The only reason for having this range is that most people are not used to numbers; anything in the range between an overkill by a factor of two and an underkill by a factor of two, 100 to 400 missiles, would be considered an absolute (or approaching absolute) deterrent. After all the only difference is in the 140 small cities, and most people stopped counting at 60 missiles when all the larger cities were covered.

Yet some might want an overkill by a factor of five. Each side would then have 1,000 missiles. Why? Well, they want to deter the irrational. Now what do we mean when we say that deterrence depends upon decision-makers' being rational? Actually we are only depending on them not being wildly irrational.[11]

By and large, if there is an overkill by a factor of five, it is hard to see how the missile buttons could ever be pressed. However, we

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[11]To paraphrase a remark by Justice Brandeis, "This requires about the same kind of rationality as not standing on the tracks in front of a speeding locomotive." When we ask if somebody is rational, we really raise three questions: Does he ask, "What are the consequences?" Does he have a rough idea of what they are? And does he care? If you have an overkill by a factor of five, most people will ask about the consequences--they can't avoid it. In this case there is no margin for error despite any inability to calculate. Even in such an extreme case, however, it is safest to use the qualified term, "near absolute" deterrence. For example, if one puts a sheet of flame between a good meal and a clinically insane, desperately hungry lunatic with a death wish, he can predict that 99 per cent of the time the lunatic will not reach through the flame. The poor fellow may be crazy, but not that crazy. Hungry, but not that hungry. He has a death wish but prefers to choose his own manner of dying. Similarly, the decision-maker and his subordinates can be crazy too, but just how crazy?

Consider Hitler. When he was obviously losing the war, he ordered poison gas warfare. His subordinate, Speer, sabotaged the order. Speer reasoned, "Yes, we have the poison gas, and we're losing the war, but the allies have more poison gas. We don't gain anything by using poison gas. We just kill all the Germans." When Hitler threatened to have him shot, Speer said, "You can shoot me, but I won't follow the orders." Hitler also ordered a scorched-earth policy, but this, too, was countered. Speer distributed machine guns to the factory workers so that the soldiers could not burn the factories down. In other words, subordinates may step in.

will suggest several ways. Admittedly these ways are difficult to imagine;
one has to stretch his imagination greatly, and to conjure up unrealistic
or bizarre-appearing situations. Yet these situations may occur, so there
is an outside chance that the buttons might get pressed; therefore, the de-
terrence is "near absolute"--not absolute. We will also note in the discus-
sion that follows, there are appreciable differences among the last three
levels on the chart--the differential numbers of small and normally incon-
spicuous cities surviving may be the difference between having some kind of
national existence and none at all. This could affect both deterrent and
prudential programs and capabilities.

Bargaining in a Balance of Terror

Let us now consider the questions just raised. Assume each side
really has 1,000 invulnerable missiles--an overkill by a factor of five.
Is there any way to exploit these missiles as instruments of foreign
policy? It is hard to see how; they seem to negate each other. Can either
side get any advantages from the weapons?   The answer is, by and large,
no. At least superficially, for say 99 per cent of the purposes, one need
only note that there is a balance of terror. But that one per cent can be
rather important. Under some bizarre circumstances these missiles might
be used to affect our foreign relations. Let us consider how one might
hypothecate force in a balance of terror environment such as the one just
described.

This use of the word "hypothecate" goes back to Clausewitz, who had
the following view of military power. When disagreements arose between
nations in the eighteenth and nineteenth centuries, the first step in set-
tling the disputes was through negotiation by the diplomats. These diplo-
mats calculated such things as the relative military power, the relative
resolve, the relative recklessness of each nation, and then set trial
balances. Sometimes they could not agree on the calculations--there might
be honest uncertainties on differences of opinion or one nation's diplomat
would push too hard for things to come out his way. The result might then
be war, and war would decide the issues. War was a settlement day--it
checked the diplomats' calculations.

It is clearly more difficult to hypothecate force in the balance of
terror environment with 1,000 missiles on each side and with mutual anni-
hilation seemingly the only outcome, but Table IV indicates five ways in
which it can be done. The first is to manipulate the threat of war.

Table IV

FIVE WAYS TO HYPOTHECATE FORCE IN A BALANCE OF TERROR

1.   Manipulation of the Threat of War
2.   Exploiting "Ban-the-Bomb" Movements
3.   Limited Nuclear Punishment
4.   Limited General War
5.   Escalation Ladder

At first sight this seems hard to do since there should be no fear
of war. The missiles are invulnerable, so nobody is trigger-happy.
Neither side is going to be accident-prone, because, again, there is no
need to hurry or reach decisions quickly. Neither side will have anything
sensible to shoot at--that's very important. If it were possible to shoot
at each other's missiles, even in an inefficient and self-defeating way,
that might at least appear to be reasonable, but one cannot shoot at the
other side's invulnerable missiles, and why shoot at the cities, since
they cannot hurt one. There seems to be a very convincing case that war
has been abolished. Both sides have a deterrent that is nearly absolute:
it is almost impossible to envisage a circumstance in which a rational
decision-maker is likely to push the buttons. But then some psychologist
will come along and say, "But, it isn't like that; people do irrational
things; mistakes do happen; the most incredible miscalculations can occur."

Even if most people convince themselves that war is unthinkable, the
weapons still exist, and they might be used. There remains what might be
called a _residual fear of war_. The psychologist is right. Accidents can
happen; staffs can disobey orders, misunderstand, or miscalculate; deci-
sion-makers can act irrationally. In any case, decision-makers will worry
about these possibilities. For example, President Kennedy has referred
to this possibility a number of times:

> Three times in my life-time our country and Europe have
> been involved in major wars. In each case serious misjudg-
> ments were made on both sides of the intentions of others,
> which brought about great devastation.
>
> Now, in the thermonuclear age, any misjudgment on either
> side about the intentions of the other could rain more devas-
> tation in several hours than has been wrought in all the wars
> of human history.[12]

(See page 21 for another similar comment by President Kennedy.)

Since the possibility of an inadvertent war increases during the
stress of a crisis, it will be of some value to avoid crises. Because
of the residual fear of war the weapons will have some value as a deter-
rent to provocations other than a direct attack. In addition, no one can
guarantee that the weapons will not be used if some "vital" interest is
challenged, and there will be ambiguity about what interests, when threat-
ened, might be considered--perhaps wrongly--vital enough to precipitate war.

This ambiguity about what is vital and the potentiality for accidents
compels caution and prudence even in the most limited crises, and there-
fore the balance of terror acts also as a deterrent to small provocations.
One can never be certain when a difference of opinion will turn into a
dispute, a dispute into a minor crisis, a minor crisis into a more serious
crisis, and so on, ending in disaster. In fact, the threat of such esca-
lation and its ultimate outcome, mutual destruction, may sometimes be
used deliberately. It may be the only weapon left for the protection of

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[12]Radio and TV report to the American people on the Berlin Crisis,
July 25, 1961.

interests less important than sheer survival, but important enough for one
side or the other to be willing to risk survival. Since taking such a risk
may be the only weapon available, a country may feel obligated to use it. In
these circumstances, the side that prevails in a dispute on the lower rungs
of the escalation ladder may be the one with the most resolve, the one most
willing to increase the danger of war by threats, recklessness, or even "in-
sanity" (real or feigned). See pages 216 to 218 on threatening inadvertent war.

One side can make meaningless nuclear tests, exploding hundreds of
megatons. It can conduct military exercises. It can deliberately procure
weapons systems which maximize the other side's perception of the danger.
If the people in New York City are told that there is a missile somewhere
in Siberia with New York painted on it, they may not get very nervous.
But if a missile is sent over in a spacecraft flashing a big neon sign,
"New York--for you," they may get nervous. If they then become blasé
about this sign, it can be enlarged or the spacecraft brought lower.
If this does not work, the number of signs can be doubled or the satellite
can be allowed to blow up accidentally in outer space with the explanation
that it was an accident but that the defect has been fixed and that most
likely it will not blow up again. In short, there are various ways of
bringing a Sword of Damocles situation home to the other side. This is
one of the major ways in which the threat of war can be used. To quote
President Kennedy again:

> Today, every inhabitant of this planet must contemplate
> the day when this planet may no longer be habitable. Every
> man, woman and child lives under a nuclear sword of Damocles,
> hanging by the slenderest of threads, capable of being cut
> at any moment by accident or miscalculation or by madness.
> The weapons of war must be abolished before they abolish us.
>
> Men no longer debate whether armaments are a symptom or
> a cause of tension. The mere existence of modern weapons--
> ten million times more powerful than any that the world has
> ever seen, and only minutes away from any target on earth--
> is a source of horror, and discord and distrust. Men no
> longer maintain that disarmament must await the settlement
> of all disputes--for disarmament must be a part of any perma-
> nent settlement. And men may no longer pretend that the
> quest for disarmament is a sign of weakness--for in a spiral-
> ing arms race, a nation's security may well be shrinking even
> as its arms increase.
>
> For 15 years this organization has sought the reduction
> and destruction of arms. Now that goal is no longer a dream--
> it is a practical matter of life or death. The risks inherent
> in disarmament pale in comparison to the risks inherent in an
> unlimited arms race. [13]

One could also manipulate both the responsible and irresponsible
peace and disarmament movements. It will seem to many people, correctly
or incorrectly, that this dilemma cannot last. If both sides have an

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[13] Address in New York City before the General Assembly of the U.N.,
September 25, 1961.

overkill by a factor of ten, sometime, perhaps next year or during the next century, the weapons will be used. The opponents have to get rid of their weapons. If they have to get rid of them eventually, why not now? And since somebody has to begin, why not your side?

The immediate goal is not to disarm the other side, since that will not work. Some "peace" movements advocate disarming as much as possible. They do not necessarily succeed in getting the missiles of their own country dismantled, but they may very well succeed in influencing other matters. This is happening, for example, in England. The ban-the-bomb movement has not yet influenced policy governing whether or not U.S. forces should be stationed in England, but it has influenced other policies more or less related to these forces. Politicians do not want these groups stirred up. Therefore, creating situations that trigger such groups into action is another tactic an opponent can use. Neither the implied threat nor the manipulation of peace groups is likely to result in overwhelming issues' being decided, though these moves may be preparatory.

Or one can indulge in a limited nuclear punishment. Let us deliberately introduce here a most bizarre form of limited nuclear punishment. Actually, this illustration is not inconceivable, nor even wildly improbable. Besides, once some kind of case has been made for the most bizarre situation of this type, an _a fortiori_ argument is available to support the possibility of less bizarre forms.

Let us imagine the following situation: We are in a Delta World (Containment and Confrontation) of an extreme sort. Some crisis flares up. Neither P nor Q is willing to back down. Q decides to put pressure on P. He sends an army over P's border and burns down one of P's cities. (This is more or less like an action in the Israeli-Arab controversy.) What is P going to do? There is some chance that P will back down. Or he may organize his own border raid. But let us assume P does not have conventional forces available for this kind of retaliation. Suppose also he is not prepared to back down and insists on punishing Q. He has a thousand nuclear weapons. Some people may argue, "Now is the time to press the 1,000 buttons." But that will not sound right after about ten seconds of thought. (And most of the time one can count on ten seconds of thought.) P might shoot one missile and destroy a city on the other side. That will teach Q a lesson. What is Q going to do at this point? (Bear in mind that Q started the crisis "legitimately," using only conventional forces.) There are many things that Q can do. He can launch a thousand missiles. That will not sound right. He can launch 100--that sounds almost as wrong--there are only 100 cities. He may launch two missiles. That sounds wrong. He may launch one. That sounds wrong. He may launch none. That sounds wrong.

Q may very well launch _one_ missile. What is P going to do then? P says, "He has destroyed two cities of mine. I have destroyed one city of his with a nuclear weapon. Now it is my turn again. But this can get out of hand. Let us stop it here. I have made my point: Q should

not do it. He has also made his point." While this sort of exchange may appear farfetched, it is certainly not impossible.[14]

Next, we can imagine using limited general war. Here, too, we will describe a most bizarre form--again to make an a fortiori case for less bizarre forms and because this most bizarre form could occur. Let us assume that Q invades P. Now it is a war to the finish--Q is going to conquer P, using conventional weapons or tactical atomic weapons. P is losing. P will then say to Q, "You must stop this war or I will blow up your entire country." Q will say, "That is unreasonable; I do not believe it." P will say, "I mean it, and to show that I mean it, I will explode 200 weapons at 200,000 feet over each of your cities." There will then be a spectacular fireworks display. Q will say, "This is the most impressive thing I have ever seen. If it is lights in the night you want, I can match you," and he explodes 200 weapons over P's cities. This does not seem very impressive. P, at this point desperate and dangerous, threatens, "I will blow up a city a day until you back down," and he may blow up one city to show that he means what he says. What is Q going to do? He has the usual set of choices. He can reply, "You are a madman; you are crazy; I will blow up two of your cities to show you how crazy you are! Why do you not stop it?" Or he can say, "Well, P really is crazy. I had better quit." Or he can add, "But I had better blow up a city just to teach him a lesson." Or he might say, "I, too, will blow up a city a day. Let us see who quits first."

All of these situations are ridiculous, farfetched, and bizarre, but they are conceivable, and not wholly impossible.

We have not yet discussed how the structure of the country can make a real difference to the sequence of events. We have pointed out 6 classes of cities (see page 118). One can assume that both sides will be anxious to save classes A and B, both because of fear of reprisal and as ultimate sanctions.[15] It would be the tendency of most Americans, if they had to

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[14]Analysts usually argue that stability is most likely with a tit-for-tat relationship. Examination of a number of scenarios indicates that with the proper timing, a tit-tat-tit sequence is also likely--more likely than either the tit-tat or the tit-tat-tit-tat sequence.

[15]It was quite late in World War II, before either Berlin or London was hit, and the first bombings of London seem to have been an accident. (See George Quester, "Bargaining and Bombing During World War II in Europe," World Politics, Princeton, April 1963, pp. 417-437.)

be involved in something like this to start at the bottom with Class F
cities and work upward. We indicate in the next chapter (discussion of
Soviet Escalation Ladder) that the Soviets may have a different "style"
and arbitrarily jump to Class C, D, or E. This could result in an erup-
tion.[16] We will discuss these issues more later.

Such concepts as limited nuclear punishment, limited strategic re-
taliation, or controlled reprisal are likely to become more important over
the next ten years. These ideas all refer to limited nuclear attacks on
countervalue targets, such as cities or other valuable property, for re-
prisal, deterrence, or bargaining purposes. There are other restrained
versions of counterforce wars. Any limited general war involves the use
of general war equipment as part of the negotiating process. In such a
war, the decision-maker asks himself: "(1) How did the war start? (2)
What are the cease fire terms we are trying to get? (3) What must we do
to protect ourselves and to get the best cease fire terms?" He does not
ask: "How can we do the most damage to the enemy?"

When the President of the United States refers to controlled response,
graduated response, or discriminating response, he is referring to limited
general war. This type of action was not considered feasible before the
Korean War. If someone had suggested it then, the response would almost
certainly have been, "You mean we would not automatically use bombs on the
other side's cities?"

In such a war one side or the other would attempt to use force in a
rational and discriminating way. We have already discussed this. The
controlled war notion is the direct opposite of the spasm war, in which
each side tries to use all its weapons as fast as it can in an orgiastic
spasm of destruction.

The controlled war may require withholding tactics and an adequate
command and control capability for use in deterrence, bargaining, and
negotiation during the war. At first glance, this strikes many people as
an academic absurdity and many people so reacted to Secretary McNamara's
speech at Ann Arbor, Michigan, June 16, 1962, when he said:

> The United States has come to the conclusion that, to
> the extent feasible, basic military strategy in a possible
> general nuclear war should be approached in much the same
> way that more conventional military operations have been
> regarded in the past. That is to say, principal military
> objectives, in the event of a nuclear war stemming from

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[16]Eruption is defined as a sudden large escalation from the lower
or middle rungs of the escalation ladder to some kind of all-out war
at the top rungs.
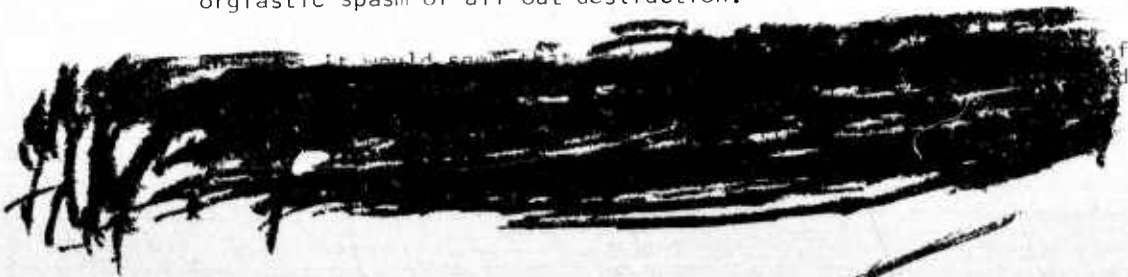
a major attack on the alliance, should be the destruction
of the enemy's military forces, not of his civilian popu-
lation.

The very strength and nature of the alliance forces
make it possible for us to retain, even in the face of a
massive surprise attack, sufficient reserve striking
power to destroy an enemy society if driven to it. In
other words, we are giving a possible opponent the strong-
est imaginable incentive to refrain from striking our own
cities.

Yet, President Kennedy declared as far back as March 28, 1961, in a
special message on the defense budget:

Our defense posture must be both flexible and deter-
mined. Any potential aggressor contemplating an attack on
any part of the Free World with any kind of weapons, con-
ventional or nuclear, must know that our response will be
suitable, selective, swift and effective. While he may be
uncertain of its exact nature and location, there must be
no uncertainty about our determination and capacity to
take whatever steps are necessary to meet our obligations.
We must be able to make deliberate choices in weapons and
strategy, shift the tempo of our production and alter the
direction of our forces to meet rapidly changing conditions
or objectives at very short notice and under any circum-
stances. Our weapon systems must be usable in a manner
permitting deliberation and discrimination as to timing,
scope and targets in response to civilian authority; and
our defenses must be secure against prolonged re-attack as
well as a surprise first-strike.

The above was not just a series of banal declaratory remarks, but
represented a complete change of policy and was recognized as such by all
the professional students of the subject. The picture of war that is
raised is completely different from the usual instantaneous and total
"orgiastic spasm of all-out destruction."

By and large, Americans (and perhaps most people in the West) are too unwilling to consider the use of moderate levels of force in behalf of limited objectives, and, once committed, they are too willing to use force in an extravagant and uncontrolled manner. Both attitudes are potentially excessively dangerous and should be guarded against. These biases could have most serious consequences unless we deliberately and consciously think about ways in which violence may occur and the means of limiting violence when we cannot prevent it altogether. The problems raised by such American attitudes are discussed further in Chapters VII, X, and XI. The American attitude should be contrasted with that of the Soviets as discussed in Chapter VII (pages 163-169) in the section on "Some Characteristics of Soviet Thinking on War."

One can generalize on these possibilities by means of the concept of an escalation ladder, as described in Chapter II, pages 22-23. The particular escalation ladder outlined in that chapter is applicable to a much wider range of situations than is encompassed by the simple model employed in this chapter. However, the discussion of more realistic models of strategy and tactics is deferred to Chapters VIII, IX, and XI.

It should be clear that even if we ignore the reality constraints and considerations that would be imposed by a full consideration of Levels One to Three and Five to Seven, that we can get into many complexities. It is hoped that these will be clearer as the result of the introductory discussion we have just gone through. Let us now turn briefly to the subject of scenarios.

Three Classes of Standardized Scenarios

We will divide our scenarios into three classes:

1) Alpha--assumes worst case type enemies--usually malevolent and competent. In the Alpha-1 version we will assume a worst "worst case"--a Soviet Union whose only objective is to totally destroy the United States and all of its people and institutions.

2) Beta--assumes Soviet decision-makers are motivated by considerations of S.U. national interests and desire for world domination and that they are willing to take great, but not overwhelming risks to achieve latter.

3) Gamma--assumes Soviet decision-makers, while tough and aggressive, are mainly motivated by prudential and S.U. national interest considerations when it comes to the use of central war forces.

It will be noted, that at the risk of some confusion, we have used Greek letters again in a way which has no direct or simple connection with the use of Greek letters in the World Futures discussion. As might be imagined Alpha scenarios all involve pre-planned, malevolent and secret Soviet attempts to annihilate the U.S. by a surprise attack out of the blue. These Alpha scenarios are implausible, but they are theoretically important because they represent one kind of maximal hypothetical threat. In almost all Alpha scenarios, no program which is currently being considered by the U.S. could protect the most vulnerable 50% of the U.S. population from being killed immediately and under all but the most expensive programs ($50-$100 billion annum), the major portion of the economy would be destroyed so that even the immediate survivors would have a bleak if not hopeless future. Indeed, under most programs almost everybody is immediately killed. Luckily these Alpha scenarios seem so extreme that one is tempted to disregard the possibility of their occurring (i.e., we do not consider seriously "worst" cases).

The next type of scenarios, the Beta scenarios, are somewhat less extreme, and represent a class of problems which, in fact, the U.S. might face. In Beta scenarios the Soviets are not so much interested in destroying the United States as in furthering their own national or ideological interests--often a very different objective. In some of the Beta scenarios, active and passive defense programs would perform rather badly as insurance for survival. In others, such programs would perform very well. Finally, we will consider a Gamma group of scenarios in which crises erupt into thermonuclear war. We believe that Gamma scenarios should be given a high priority in the design and evaluation of ACWS's.

Let us consider some Alpha, Beta, and Gamma scenarios.

Alpha-1: An Extreme Scenario

1. U.S. maintains an "adequate" retaliatory force.

2. Soviets procure great numbers of large yield, soft, concentrated (perhaps hidden), unalert missiles[17]

3. They set, perhaps years ahead of time, a D day, H hour, M minute, S second.

4. They launch an optimized salvo at the two or three hundred largest U.S. cities, most of which they destroy.

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[17]Such missiles require only one crew (rather than the five required for 24 hour-7 day a week operation) and are much cheaper to base, operate, and maintain. One might expect a factor of two or three in savings in each five years of costs, thus allowing the Soviets to buy two or three times as many missiles for the budget than normal operating procedures would allow.

5. They also launch a supplementary area attack at U.S.
    rural regions, causing immense, perhaps total, damage.

6. However, the portion of the force allocated to destroy
    SAC is unable to do its job and SAC launches an all-out
    retaliatory blow at Soviet society.

7. Their country is then destroyed by this U.S. retaliatory
    blow. Their success in killing U.S. civilians does not
    affect this result.

8. They say, "We're sorry we launched the attack."

While the above Alpha scenario is clearly not a likely situation,
neither is it just a strawman to be refuted and forgotten. It is intended
to establish the point that our protection today depends, to some extent,
on the Soviets having some combination of caution, restraint, apathy, or
incompetence. In the future it may depend on other nations (e.g., China)
having some combination of these qualities. Thus we must live with the
fact that there are forms of the Alpha scenario, some of them more plaus-
ible than Alpha-1, which could occur. The problem is that it is so dif-
ficult to handle Alpha scenarios in almost any of their forms, even the
most reasonable ones, that it is national policy today, and likely to con-
tinue to be national policy, to depend upon line 8, i.e., that the Soviets
(or other potential attacker) would not be willing to accept the possibil-
ity of retaliatory damage and would be deterred. It is also, currently,
part of national (NCF) policy to have sufficient offensive nuclear force
so that the Soviets are unlikely to procure only or even many large yield,
soft, concentrated (perhaps hidden), unalert missiles, partly because
these are "provocative" and partly because they need to invest their
money elsewhere. The same vulnerability-reducing reasons that induced
us to go to small Minuteman, small Polaris, and relatively small Titan II's
(compared to what one could have), are likely to induce the Soviets, to a
great degree, to do the same. They too must worry about our striking
them in some intense crisis (such as the Gamma-1 scenario to be described)
and they too must worry about having insurance and being able to stand
firm. In addition, using secrecy as a primary defense is not really
practical. No great nation can depend, by means of security procedures,
on the other side: 1) not having a secret agent, 2) not getting a pur-
loined or stolen document, 3) not having a special reconnaissance tech-
nique (e.g., U-2 or Samos) and so on. Secrecy is simply too unstable
a method of protection to be relied on as a mainstay[18] by a great nation

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[18]Secrecy may also be undesirable as a supplement because it tends
to accelerate the opponents' efforts (and also the arms race). For ex-
ample, the current U.S. missile superiority is largely the result of S.U.
secrecy which in turn resulted in overestimation of the Soviet rate of
procurement of missiles. Originally the major Soviet interest in secrecy,
as described in the next chapter, was more related to privacy than secrecy,
but the Soviets have since picked up the probably mistaken notion that it
is one of their great national assets. In fact, the Soviet's almost patho-
logical desire for secrecy is probably incompatible in both the short and
long run with their national interests and it is probably doing all con-
cerned a service to point this out on all possible occassions.

if it can pursue some other technique; therefore, it is almost certain
that in the long run the Soviets will go in for hardening, dispersal,
and perhaps mobility--all of which entail great expenses and tend to
reduce the efficient size of the missiles.

In addition, the Soviets have not shown great interest in central
war as compared to their interest in European and smaller wars. One
way to explain much of the Soviet strategic posture is to argue that
they have focused most strategic attention on Europe, and also to some
extent, have had a doctrinal lag and thus have been more or less intend-
ing to refight a World War II type of war with modern equipment. Hence
in the early sixties, hundreds of Soviet IRBM's faced Europe, while only
tens of Soviet ICBM's faced the United States. While there are indi-
cations that the Soviet military establishment is changing, there is no
great reason for believing this change will be dramatic, thorough, or
necessarily even very effective; and there is some reason for believing
that the Soviets will continue to be plagued by various service and
civilian doctrinal lags (see next chapter). While the U.S. cannot rely
completely on possible Soviet ineptitude or apathy toward central war
for a defense, it should be prepared to exploit it, if it persists.

Let us go on to the Beta scenarios, which are somewhat more reason-
able and thus more to be worried about:

Beta-1: A Less Extreme Scenario

1. U.S. maintains retaliatory force it considers adequate.

2. Soviets procure, secretly or openly, a counterforce
    capability.

3. At some point, they launch an optimized attack at U.S.
    population and SAC.

4. Attack goes well, but their population is hit by a
    residual SAC force which survived the S.U. attack.

5. However, their society survives this attack, while U.S.
    society never recovers from the war.

Beta-2

1. U.S. maintains a retaliatory force it considers adequate.

2. Soviets procure, secretly or openly, a counterforce
    capability.

3. At some point, they launch an optimized attack at U.S.
    population and SAC.

4. Attack against U.S. SAC goes badly and they are "anni-
   hilated" by U.S. retaliatory forces.

5. Both societies are destroyed or grievously damaged by war.

6. The fact that U.S. society is destroyed does not recom-
   pense the Soviets for the destruction of their own so-
   ciety. Even though in some sense the Soviets have "won"
   the war, the Communist Party does not have the strength
   and the resources to control the world or even the rem-
   nant of their own society, and they are sorry they
   started the war.

Beta-3

1. U.S. maintains retaliatory force it considers adequate.

2. Soviets procure, secretly or openly, a counterforce capability.

3. At some point, they launch a "counterforce with avoidance"[19]
   attack and send a blackmail ultimatum.

4. We reply "counterforce with avoidance" and start bargaining.

5. There is a pause or abatement of hostilities and a period of
   negotiation.

6. The war is terminated without ever having a large counter-
   value attack.

7. The terms of the termination reflect the military situation
   as follows... (see pages 274-279 and 302-313).

The above three Beta scenarios all start with the same first two
or three steps, and then branch. From the survival point of view, the
first scenario is the hardest to deal with, but it is presumably also
the least likely. Its probability is low partly because it would be
difficult for the Soviets to procure such a large counterforce capabil-
ity secretly; and if they procured such a force openly, we would not be
likely to permit it to become large enough, relative to our own force,
for it to be able to do a major amount of disarming of our retaliatory
force. But equally important, even if they think (possibly wrongly)
that they can disarm us, they are not likely to be willing to rely on

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[19]As explained in Chapter VIII this is an attack in which, whenever
the military penalty is small, the attacker chooses options which mini-
mize collateral damage to civilians and property. As opposed to an
"augmented counterforce attack," in which whenever possible "bonus"
damage to civilians and property is sought, a "counterforce with avoid-
ance" attack on U.S. might cause 1-10 million U.S. dead, while an aug-
mented counterforce attack of roughly the same size and same "military
results" might cause 20-100 million dead. For a list of possible at-
tacks, see page 197.

that belief to the extent of launching a major part of the first wave
at the U.S. population, thus guaranteeing, or making likely, a U.S.
countervalue spasm response. They would lose little or nothing by
waiting to see how effective their counterforce is. In other words,
they would be too concerned by the possibility of a Beta-2 version of
the scenario to use Beta-1; therefore they would most likely pick the
Beta-3 version, which they might judge would maximize the U.S. incentive
to have a controlled response and which would enable them to respond
flexibly to what actually happens on their first strike; Beta-3 is not
only far and away a safer scenario for them to attempt than Beta-1, it
may even lead to a more desirable result than Beta-1 (from both the
S.U. and U.S. points of view). The Beta-3 scenario is, of course,
exactly what the controlled response doctrine (in either its MFD, DI,
NCF, or other forms) is designed to deal with.

Let us now assume a Beta-3 scenario. In this case, if we have an
MFD policy, and the Soviets succeed in their counterforce operation,
about all the U.S. can do is surrender. While this is not the sort of
remark that goes well, it is realistic. After all, the Germans and the
Japanese were probably just about as tough as the Americans, and when
military events went badly for them, and their forces were destroyed,
and their populations were hostages to our forces, which then had the
ability to wreak unlimited amounts of harm, they surrendered, even though
it was "against their religions." It is reasonably clear that we are
likely to do the same. If we do not, the MFD program for survival is
not likely to work and the Soviets would presumably simply annihilate the
population of the U.S.

In the case where they try the Beta-3 scenario, and the attack goes
badly, or not as well as they expected, and we have an MFD policy, about
all we can aspire to is to call the war off, perhaps after wreaking some
punishment on the Soviets. If our people are vulnerable to later waves
of the Soviet attack, we cannot presumably compel any major degree of
surrender of the Soviets. All we can do is punish the Soviets, to some
degree, for what they have done (presumably accepting retaliatory punish-
ment in return), and then call the war off. This is a major weakness of
the MFD policy.

If we have either a DI program, which would include active and
passive defense for the population, or an NCF type program (with even
more active and passive defense), then presumably we are prepared, to
some degree, to wage the war and hope in addition to surviving, either
to win it, or to gain much more advantageous terms than we would with
an MFD policy. For more discussion on war termination possibilities see
discussion in Chapter VIII (pages 234-241) on "Central War Problems,"
Chapter X (pages 274-279) on "The Need for..."Negotiation," and Chapter
XI (pages 302-313) on "Escalation, Controlled War, and War Termination."
However, most of the discussions refer more to the Gamma-type scenarios
to be discussed than to the Beta scenarios.

Let us now look at the third set of scenarios which we will call
the Gamma scenarios.

Gamma-1: A Standard Crisis Scenario

1. Crisis in East Germany or Berlin.

2. High level of internal violence.

3. Intervention by "NATONIANS."

4. S.U. "ultimatum."

5. Limited Evacuations.

6. U.S. or NATO reply.

7. S.U. ground attack, other major violence, or nuclear
    demonstration of force.

8. Exchange of messages.

9. A cessation or abatement in hostilities.

10. "Armistice" is violated.

11. More evacuations.

12. S.U. advances.

13. U.S. ultimatum.

14. S.U. sends new ultimatum along with "counterforce
     with avoidance" strike.

15. U.S. announcement of open cities, NATO announcement
     of "open Europe" west of Rhine, selective creation
     of other open areas in Germany.

16. U.S. also sends ultimatum along with its "counter-
     force with avoidance" strike.

17. . . .

Almost everybody who tries to write a plausible scenario about the
start of World War III tends to focus attention on the German problem,
either on Berlin or the East German-West German border. Therefore, we
will illustrate the Gamma-1 crisis scenario by assuming some kind of
crisis in East Germany or in Berlin, or both, which reaches a high level
of violence, but is still internal. This level of violence eventually
causes, possibly against West Germany's official objections, intervention
by German citizens and/or military. A reasonably high level engagement
then occurs between the East Germans and the West Germans, with possibly
Soviet troops involved. At this point the Soviets send an ultimatum
that the West Germans must withdraw. One can assume that the crisis
will have reached such an intensity that in many cities around the world
some people will start to evacuate. There will be some sort of reply to
the Soviet ultimatum which will express feelings of sympathy for the

East Germans, but very likely will largely accede to the Soviet request
not to intervene. However, it may not be possible because of "technical
problems" or official or unofficial sabotage, defiance or unauthorized
behavior actually to disengage the West Germans from the East Germans.
At this point, the Soviets could make a punitive ground attack or ini-
tiate other major violence, such as an exemplary or demonstration use
of nuclear weapons.

For the purpose of our scenario, assume a Soviet ground attack
which is moderately successful. There would be another exchange of
messages; one could easily imagine at this point a pause or even formal
truce. Given the current balance of terror and current attitudes toward
thermonuclear war, it is almost overwhelmingly probable that things will
be settled at this point (if they have not been settled earlier). But
let us assume, however, that for some reason they are not settled.
There would then be more evacuations, continued Soviet advances, pre-
sumably eventually a U.S. or NATO ultimatum.

We are now at the point where the war actually starts. There can
be many, many versions. We consider two: In the first, a Gamma-1
version, there is a S.U. "counterforce with avoidance" strike. In the
second, a Gamma-2, there is a U.S. "counterforce with avoidance" strike.
Let us discuss each in turn.

If the public statements by various administrative officials are
reasonably correct, the Soviets really do not have anything like an over-
whelming superiority. In fact, they very likely have a rather pronounced
inferiority. Let us assume, however, that they strike hard enough to
take out the most important U.S. strategic retaliatory forces. Once they
have done this, it should be clear to the U.S. that it can no longer
"easily" win the war. In other words, after the Soviet strike, while the
U.S. may still have some degree of superiority, it is nowhere near as
superior as it was before the strike. In some sense, what has happened
is that the Soviets have called our "bluff," and have risked an all-out
or spasm response by us. If we do respond with a devastation attack, it
may well be the end of the Soviet Union, but they in turn would fire
their withheld forces at U.S. countervalue targets. Depending on what
they have and the state of our active and passive defense, this response
could inflict anywhere from 10-100 million U.S. casualties, and set us
back economically from a few years to as much as a century.

Assume that we wish to avoid this last eventuality, so we in turn
attack the Soviets very carefully, avoiding all of their major population
and industrial centers. Depending now on the details of the military
events, there would then be some asymmetrical threats available to each
side. While the asymmetries might tend on balance to favor the U.S.,
destructive capacities are not likely to be so asymmetrical as to enable
us to have our way completely. One would guess that a relatively likely
occurrence would be an armistice and some kind of a settlement. The
risk that each country is now running has by this time far outweighed
the local issues in Germany and Berlin.

Another possibility is continuing military operations with one
side getting decisive superiority. A third possibility is continued
military operations which finally erupt into all-out countervalue
attacks. If in the above scenarios we have entered the war with prep-
arations suitable to an MFD policy (or less), then our major civilians
and cities will have been hostages to whatever residual Soviet forces
existed at any time, since our urban population would, at best, be in
relatively soft shelters, unevacuated and with no active defense. If
we had adopted (or continued) either the DI or the NCF policies, then
of course as Soviet forces decrease in capability, more and more U.S.
cities and populations are, rather rapidly, removed from being Soviet
hostages.

Let us now consider the Gamma-2 version in which the war is ini-
tiated by a U.S. "counterforce with avoidance" strike. We strike the
Soviets quite carefully, simultaneously sending messages of what we
want and describing in detail to the Soviets (if we have not already
done this ahead of time) what will happen to the Soviet Union if they
fire a spasm response or launch any large countervalue attack. At this
point, we have probably degraded the S.U. to the point where, even if
we have only an MFD policy, they could not kill much more than 10 or 20%
of the U.S. population, and they may not even be able to do as much as
that. This is particularly likely if it turns out that various kinds of
Soviet weaknesses that some U.S. strategists have conjectured about
actually do exist. At this point, we have, in a sense, called the Soviet
"bluff." We did strike and accepted the risk of their spasm. Let us
assume the Soviets withhold their spasm, either because they cannot fire
it, or because they are fearful of the U.S. counter-reply. About all
the Soviets could then do is negotiate. Now the asymmetry in threats
could be so large (particularly if we had a DI or NCF posture) that it
is quite likely that the U.S. will get most of its minimum demands.

As is indicated in Chapter XI (pages 302-313) in the discussion of
"Escalation, Controlled War, and War Termination," it is very difficult
to evaluate each side's military power unless one does the evaluation in
some kind of context. The reason for having standardized Alpha, Beta,
and Gamma scenarios is to supply some standardized contexts to facilitate
such evaluation and communication of the results. We indicated in the
first two pages of this report that one of the most common errors in U.S.
analyses is too great a concentration on Alpha, Beta-1, and Beta-2 type
scenarios and not enough on Beta-3 and Gamma type scenarios.

CHAPTER VII

EACH SIDE'S BASIC CAPACITIES AND RESOURCES FOR CENTRAL WAR

Introduction

The simple P-Q models pass over the last three levels of analysis by simply assuming symmetrical and adequate capabilities. No consideration was given either to possible asymmetries in National Goals. Yet, to the extent that the competition is a zero sum game with a winner and a loser, success is most likely to ensue to that side which best exploits the asymmetries which favor it and alleviates those which favor the other side. In any case, whether as a result of deliberate policy or natural evolution, the asymmetries which exist at the fourth, fifth and sixth levels of analysis arise out of the asymmetries which exist at the first three and the seventh level. We will focus attention on the latter here, deferring discussion of the effects of Asymmetric National Goals to Chapters X and XI.

The Definition of War Potential

The actual analysis of national capacities and resources is a matter of sustained and systematic work in a very wide range of subjects. Klaus Knorr properly argues that "the armed forces are only the 'cutting edge' of the nation's military power. A major war may test all the strengths and weaknesses of nations,"[1] and he quotes Rudolf Steinmetz as saying that there may literally be "no quality, no strength or weakness, no mistake or advantage without influence on the outcome of the struggle."[2] While the above was most appropriate for long wars of attrition, it still has much, even if lessened, relevance for prewar preparations. But a classification of the components of strength or weakness is less easily agreed upon. Knorr proposes three broad categories: economic capacity, administrative competence, and motivation for war, but he is deliberately limiting himself to the study of the capacity of nations to provide military manpower and supplies. Thus geographical and social factors must be added to his classification, as well as some "soft" factors--that is to say, those elements in a nation's basic capabilities which are not to be measured by simple techniques or, often, not able to be comprehended in objective terms, although objective statements may be made about them. The perception of values that motivates a population or a government in a given war situation is an important example; perhaps equally important is the nation's capacity to learn to use the weapons of war skillfully--to be good at tactics and strategy as well as at research, development, production and operation. All of these can be given an objective formulation, yet they cannot be measured by simple objective tests; and the most reliable "outside" estimates are often the result of experience or of intuition.

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[1] Klaus Knorr, The War Potential of Nations, Princeton, 1956, p. 40.

[2] S. Rudolf Steinmetz, Soziologie des Krieges, 2nd Ed., Leipzig, 1929, p. 227.

Hans Morgenthau offers another list of factors in war potential: geography, national resources, industrial capacity, military preparedness, population, national character, national morale, quality of diplomacy.[3] Still other classifications are available, and all agree, in one or another formulation, on the general and measurable elements of geography, natural resources, economic plant, and of population size, distribution and skills. They also agree, but with much less clarity of definition, upon the reality and importance of such factors as political and social institutions, national values and characteristics, quality of leadership; or national competence, morale, cohesion and motivation; or national psychology, inventiveness, adaptability and perserverance.

It is, of course, among these latter qualities that the analyst's deepest problems exist. A nation's capacity to raise armies and manufacture missile systems is potentially susceptible to measurement. But God is not always on the side of the big battalions. Not only is there the fact that well-led and highly motivated small forces sometimes defeat large ones,[4] but there is the possibility that, short of direct nuclear confrontations and central war, a materially inferior society may, by a superiority in the arts of coercion, or by an advantage in assurance, morale, moral hardness, or ruthlessness, overcome materially more powerful societies. Thus in our consideration of future worlds in Chapter V there was much attention paid to the possibility of charismatic leaders or messianic political or ideological movements arising to challenge the established international order. Such a leader or movement, armed with even a modest number of nuclear weapons, might by fervent commitment to a cause (even an unreasonable or unattainable cause), and a willingness to run risks, enjoy a great advantage over nations whose opposition was lukewarm or ambivalent or deeply inhibited by a perfectly reasonable fear of the consequences of nuclear war. And even Soviet and American societies are likely to respond somewhat differently to the relaxations of Alpha and Beta Worlds or the stern challenges of Delta and Epsilon (see pages 85-86).

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[3] Hans Morgenthau, <u>In Defense of the National Interest</u>, New York, 1961, p. 175.

[4] German forces in the West in 1940-41 numbered 136 divisions and 2,800 tanks. The Allied forces which they defeated in a brief campaign-- French, British, Belgian and Dutch--consisted of 156 divisions and more than 4,000 tanks operating behind extensive permanent fortifications. Moreover, the German tanks, while generally faster than the Allied, were mostly inferior in armor and firepower. The sole important material advantage of the Germans was in airpower. Their decisive non-material superiorities were in strategy, tactics, military organization, and morale. (Knorr, <u>op. cit</u>., p. 30)

U.S.-Soviet Asymmetries

Of course, should the U.S.-S.U. conflict reach the level of central
or spasm war, many and possibly nearly all of the basic asymmetries might
be wiped out--might be rendered irrelevant except as they have contributed
to the central war forces in being at the onset of war. If there should
be a relatively prolonged central war with limited nuclear exchanges--city-
trading, the practice of nuclear blackmail, slow-motion war, etc.--polit-
ical, social and psychological asymmetries could possibly determine the
outcome--could produce the backdown, capitulation, or even the internal
disintegration of one of the countries. A prolonged war with large-scale
conventional operations under some kind of nuclear restraint or balance
of terror could throw the result onto much the same kind of asymmetries
that have determined the earlier wars of the twentieth century--asymmetries
not only of assurance, perserverance, and governmental and military com-
petence, but of industrial productivity and adaptability, technological
competence, national resources, wealth, and manpower.

Yet here again it would be a mistake to assume that conditions, and
determining factors, would be the same as they were, say, in World War II.
The very existence of nuclear weapons and the threat of their intervention
in conventional campaigns, the attitudes built up in governments and pub-
lics over the years of the nuclear era, the social and political changes
that since 1945 have taken place in the Soviet Union and in all of the
countries of the West, the fact that none of the world's armed forces are
today prepared for conventional fighting on a scale remotely approaching
the mass wars of 1914-1918 and 1940-1945, the existence of third powers
possessing nuclear weapons and the possibility of decisively intervening
(either to their own advantage or to suppress a danger to the international
community)--all these factors would almost certainly make any new non-
nuclear great war profoundly different from the earlier ones of this
century.

At a still lower level of conflict, at the level of a cold war which
stops short at direct confrontation between American and Soviet forces
but is pursued by means of political and politico-military measures of
coercion, subversion and proxy warfare, through covert activities, propa-
ganda and ideological warfare, the less easily measured asymmetries could
prove to be the most important. The Western powers believe that they en-
joy advantages in the quality and popular strength of their political sys-
tem, in their economic vitality and inventiveness, in the moral weight of
the Western ideological position--all of them advantages that are in fact
difficult to measure objectively. But the argument is also made that the
Soviet bloc, by possessing a coherent theory of conflict and of historical
development, and a conviction that Communist victory is assured by dialec-
tical necessity (together with that liberation from conventional restraints
that is conferred by a belief in historical necessity), has advantages over
a West whose values, whatever their merit, are plural and often contradic-
tory, and which often is distracted or irresolute in its foreign policies.
The West errs, according to this argument, in too often failing to under-
stand the challenge of the Soviets, taking Soviet policies as essentially

limited or pragmatic actions of the same kind as most Western programs. Thus, in this view, real, even if non-material, advantages are enjoyed by the Soviet bloc in working by a comprehensive doctrine of politics and conflict, in possessing a superior vision of the conflict and the superior morale that is presumed to be the result of a conviction in eventual and necessary success.

Some of these interpretations of Soviet policy may be exaggerated (and the weight of serious opinion today, of course, is to interpret Soviet international policy as much less well-planned and much more the result of immediate conditions and perceptions of advantage than this interpretation would suggest); nevertheless it is true that the Soviet Union's Party leadership, government, and population are formally committed to an ideology which purports to interpret all of contemporary history as a struggle of obsolete social forms to resist socialism, and which insists upon the inevitable victory of Communism. These are elements in the sources of Soviet national action that cannot be quantified; they provide non-material asymmetries in the motivation and morale of Soviet actions that can be interpreted, but not objectively calculated. But the character of the effects of these beliefs cannot be unitary, and even among Communists the results may be contradictory. Such beliefs may motivate rash national actions--actions calculated in terms of ideological guarantees of success rather than the realities of politics and power. But they may also provide rationalizations for inaction or even for failure. The Chinese thus may appeal to Marxism-Leninism as demanding unremitting conflict with imperialist powers, while Chairman Khrushchev simultaneously defends his expressed fear of nuclear destruction by appeal to the guarantee of eventual Communist victory. We will return to this matter in some detail in a subsequent discussion of the Soviet attitude towards force as an example of a "soft," or non-quantifiable, factor in a nation's central war capabilities.

Crisis-Conflict Asymmetries

The existence of national asymmetries is, of course, apparent to everyone, and in the daily policy and operations of governments all states acknowledge, use, and attempt to exploit these differences among societies. Moreover they are the raw materials of all intelligence and political operations and analysis. Empirical adjustment in accordance with generalized perceptions of asymmetry governs much of the policies of states, and in part--perhaps in large part--the asymmetries are also dealt with consciously and intellectually. But their specific relevance to the central war capabilities of the Soviet Union and the United States is perhaps less adequately, or less systematically, analyzed--at least in the United States (a fact which may in itself constitute an important asymmetry between the U.S. and the U.S.S.R.). This is especially true as the central war strategies dictated by nuclear weapons systems tend to emphasize forces in being and to discourage the consideration of elements in national strength that are not integral to nuclear forces and nuclear military operations. There is an important difference between thinking that is oriented to escalation ladders conceived in terms of temporary crises, and thinking that is concerned with escalation ladders conceived in terms of restrained conflict

and political-military combat--where the time-frames are likely to be long
rather than short and many important actions very deliberate, limited, and
controlled.

Most American strategic thought has concerned itself with crisis lad-
ders or even more apolitical scenarios--often with the kinds of problems
which, as we noted earlier in this report, most of the strategists them-
selves actually think of as the less probable of the tests this country
must be prepared to face--even in the central war area. The Soviet Union
may be described, on the other hand, as using, in effect, a conflict es-
calation ladder--a ladder concerned with the pursuit of individual advan-
tages and gains and with the disruption of the political defenses of its
opponents. We have discussed such ladders elsewhere.[5] We show one of them
on the following page. Such ladders--essentially political in conception--
nevertheless have implications for central war strategy.

Thus it may be that partly out of doctrinal lag, partly out of a dif-
ferent conception of its needs and interests, and partly out of a different
style, the Soviets seem to oscillate among such relatively "crude" ACWS's
as FD, PMR, NMR, CH, LSR and the like. In the event of a central nuclear
confrontation its strategy might still be directed to victory through po-
litical, coercive, or socially disruptive means, rather than to "technical"
military victory.

The United States, on the other hand, is a defensive and conservative
power in the cold war, concerned to preserve the international system
that now exists (or to reform it gradually). It resists radical change in
the system. It attempts to contain Soviet power and is not committed to
offensive action against the Soviet bloc. Thus it is compelled to defend
against a very wide range of possible, even if implausible, Soviet threats.
The United States may, by virtue of its international role and obligations,
be compelled to close and lock doors that the Soviet Union may have had no
thought of opening. One aspect of the situation is reflected in discussions
of exchange rates in Chapter IX, where scenarios are considered that in-
dicate that R rubles spent by the Soviet Union would negate D dollars spent
by the United States, the relationship R/D being the marginal exchange rate
in the scenario. It is often thought that a sound criteria for a weapons
system is that the exchange rate be about even.[6] But this actually may
not be so. It may be proper for the United States to spend at a very dis-
advantageous exchange rate, just as it may be necessary and proper that a
householder spend much more on locks and protection for his home than a
burglar spends on a jimmy. Thus in the conflict between the United States
and the U.S.S.R.--or in a contest between any conservative power interested

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[5]See Soviet Attitudes Towards the Use of Force by Edmund O. Stillman
(to be published).

[6]One ruble is worth about $1.11 at the official rate of exchange.
This rate seems to reflect the facts of life in consumer goods. In mili-
tary and industrial products, one ruble may be worth on the average about
$2.50.

A SOVIET ESCALATION LADDER

Attacks on   25. Salvo
U.S. Zone   24. Restrained Population Attacks
of Interior   23. City Annihilation Attacks (with evacuation warning)
                 22. Slow Motion Property Attacks

                      :   .   :
                      .   .
                      :   .   :

                 21. Devastation Attacks Against U.S. Allies
                 20. Force Reduction Attacks Against Major U.S. Overseas
Sanctuary-   Bases and Forces (e.g., Polaris Submarines, Surface
Avoiding   Fleet)
Nuclear   19. Population Attacks Against U.S. Allies
War   18. Property Attacks Against U.S. Allies
                 17. Symbolic (non-lethal but provocative) Demonstration
                      of Strategic Nuclear Weapons (e.g., oceans, space)
                 16. Tactical-Nuclear Central War

                      :   :   :
                      :   :   :
                      :   :   :

Non-nuclear   15. Conventional Central War
Central   14. Semi-Confrontation Conventional War Involving Soviet
Confrontations   Volunteer Forces

Non-Lethal   13. Non-Lethal Act of Central Confrontation with U.S.
Central   (Berlin Blockade)
Confrontations   12. Symbolic Central Confrontation with U.S. (Cuba)

Violence by   11. Semi-Confrontation Wars (Large)
Proxy (Sub-   10. Semi-Confrontation Wars (Small)
limited and   9. Proxy Wars
Limited War)   8. Terrorist Acts Against Persons by Proxy
                  7. Terrorist Acts Against Property by Proxy

                  6. Vitriolic Propaganda Attacks and Diplomatic
                      Harassment by U.S.S.R.
                  5. Vitriolic Propaganda Attacks and Internal Political
Political   Harassment by Proxy
and   4. Subversion
Psychological   3. Adverse Propaganda and Diplomatic Non-Cooperation
Warfare   by U.S.S.R.
                  2. Adverse Propaganda and Non-Cooperation by Proxy
                      (International Front or Local CP)
                  1. Espionage

in protecting major elements in the status quo, and a revisionist or revo-
lutionary power--an asymmetry in financial and technological resources--
or in the willingness to spend them--could be important in unexpected ways.
And the cause of this would be still other asymmetries that lie in the
political motives and goals, the modes of action and conflict, of the two
powers.

Material Asymmetries

Of the material asymmetries among nations, size, population, and lo-
cation are traditionally the most important. Geography has classically
been, in Ropp's words, "the bones of strategy,"[7] and size is a considera-
tion of peculiar importance in the analysis of the Soviet Union because
Russia is, of course, a country which has twice won wars that it would
have lost had its size been comparable to that of the countries of Western
Europe. A consciousness of size, and a sense of its exploitation, is
deeply entrenched in Soviet military tradition. Thus the size of Russia
is a material factor affecting its own and its enemies' strategies and
force dispositions, but it is also a nonmaterial and nonmeasurable fac-
tor to the degree that it influences, and possibly distorts, the thinking
of both Russian and non-Russian leaders and staffs. In the modern world
size can confer an illusion of invulnerability. The number of significant
nuclear targets in a large country may actually be less than in a small
country. Largeness too may be a handicap if the nation is made up of a
number of ethnic or cultural regions with a degree of local loyalties or
traditional sentiments of autonomy. Such a state may be vulnerable to
fragmentation under certain kinds of attack as an ethnically homogeneous
society, like France or Germany, would not be. Do the people of Soviet
Georgia really want to die for Great Russia--or for Bulgaria? The ques-
tion must at least be raised; just as Europeans have felt it necessary to
ask themselves if Americans would really be prepared to lose their great
cities for the sake of Europe's defense.

Nevertheless a gross advantage remains in nuclear war for a very
large country. Comparatively few bombs could completely wipe out the
Benelux states and their 21 million inhabitants. Canada, with a lower
population but a hundred times more surface area, could undoubtedly be
damaged heavily by the same scale of attack, but to wipe out Canada would
require a vastly enlarged attack, perhaps of an order of magnitude larger.

The power relationship between France and the Soviet Union is entirely
asymmetrical in that France can at best "tear an arm off" Russia, while the
Soviet Union could annihilate France. But this advantage conferred upon
Russia by the relative size of the two countries and the superior nuclear
arsenal of the Soviet Union is not, of course, an absolute one, only a
relative advantage. If it became cheap and easy for small countries to
manufacture effective "invulnerable" weapons systems with hundreds of
missiles with warheads in the multimegaton class, the small state might

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[7]Theodore Ropp, War in the Modern World, Durham, N.C., 1959.

achieve practical parity with the larger country, particularly if the
large country did not procure elaborate active and passive defenses.
Indeed, if the large country depends only on deterrence, the small coun-
try may need only tens of invulnerable missiles to achieve a working
parity. And the missiles perhaps need not be very cheap or easy to make,
since the West European countries are all societies of very advanced tech-
nology and considerable wealth: the Soviet Union's present technological
and economic advantage over West Germany, for example, is not one that
can be relied upon to endure indefinitely--certainly not to the same degree.

Similarly, with a great advance in anti-missile defenses, a small coun-
try might prove easier to defend than a large one. Moreover, nearly all
the countries which are prospective manufacturers of nuclear weapons also
have territorial holdings in Oceana or the Arctic regions where weapons
might be emplaced, giving to a Norway, France, or Holland certain of the
territorial-strategic attributes of bigger nations--at least in terms of
separation of strategic bases and metropolitan areas.

Like size, location is also a strategic attribute that has changed in
its implications in an age of nuclear weapons. Britain is usually thought
of as the state most drastically affected, its channel defenses no longer
effective; but in lesser degree the United States has, of course, also lost
many of the advantages of geographical isolation. Its situation has funda-
mentally changed, even though the influence of its past isolation continues
to affect American military and political attitudes and policies. Russian
policies in Eastern and Central Europe have similarly been deeply affected
by the traditional Russian vulnerability to invasion over the Central Euro-
pean plain--a condition possibly, although not necessarily, rendered irrele-
vant by missile systems.

The distribution and nature of assets within a country is also a mat-
ter of potential asymmetry. Mineral resources may be relatively invulner-
able to nuclear attack. Forests are not. An urban population may be vul-
nerable in a way that an agrarian population is not. While populations
of cities can sometimes be shifted at comparatively short notice, the
cities themselves cannot. Weather and climate can make a good deal of
difference in the feasibility of civil defense--both in preattack move-
ments and in postattack recuperation.

Vulnerability is not only a question of size, but of organization.
Highly centralized countries like France or Great Britain would be damaged
out of all proportion by a major thermonuclear attack on their capitals.
Although neither capital is very near the geographic center of the coun-
try, both are the heart of the railway system, the road system, the tele-
graphic and telephone system, the banking system, the whole financial
structure (stock exchanges, insurance companies), the postal system, and
the repositories of the country's cultural and artistic wealth (museums,
opera, theaters, art galleries, national monuments), quite apart from be-
ing the seats of highly centralized governments. This is due to many
factors, not least to their having been capitals of the whole country for
more than a thousand years, a distinction that cannot even be approximated

by Rome or Bonn or Berlin, let alone by Washington, D.C. The United
States, despite the formation of huge megalopolises centered around New
York, Chicago and Los Angeles, is in a much less disadvantageous posi-
tion. That impression is not changed much if the population is taken
into consideration. The Greater New York area, despite its enormous
population, contains less than 10% of the country's total population,
while Greater London and Greater Paris contain about 20% of theirs. This
is another factor increasing France's and Great Britain's vulnerability
to thermonuclear attack. This vulnerability, in turn, must affect the
assurance and strategic posture of the countries concerned--particularly
against small Nth countries. In this respect the Soviet Union tends to
be more like France and Britain than like the United States. Moscow and
Leningrad, while they each contain less than 5% of the U.S.S.R.'s population,
nevertheless play a more important role in their country than New York
and Washington do in ours.

    The following chart, presented as an illustration of one of the ma-
terial asymmetries between the United States and the Soviet Union, can
usefully be compared with the P-Q model presented in the Introductory Com-
ments to Part II (pages 118 to 119). It will be noted that in cities
in classes A through C, including 13 cities of more than 1.5 million pop-
ulation, only two are Russian--Moscow and Leningrad. Thus the table on
page 118 would, in the actual American-Soviet relationship, be altered
roughly as follows (where we have added a G class):

Class	Population (millions)	Number of Cities U.S.	U.S.S.R.	P-Q Model
A	5 - 15	3	1	1
B	3 - 4	2	1	1
C	1.5 - 2.5	6		14
D	1 - 1.5	5	5	14
E	0.5 - 1	22	22	30
F	0.1 - 0.5	115	113	140
G	0.05 - 0.1	60	138	---

    Of the total U.S. population, 69.9% is urban, while of the total
Russian, 48.8%. From this data it is apparent that the model has
only limited relevance to the real situation, affected as it is by asym-
metries of geography and population. Actually some of the advantages
which size would seem to confer upon the U.S.S.R. are in fact negated by
the distribution of its most valuable population, the urbanized portion.
Analysis of the size and distribution of cities in the U.S.S.R. and of
the portion of national plant and wealth contained in the cities would
change the picture further, as would analysis of the distribution of
skilled manpower, its mobility under crisis conditions, whether mobility
is accompanied by a flexibility in the skills of this manpower and an
economic capacity to make use of the skilled manpower in altered or im-
provised conditions. The competence of the administrative apparatus of
both economy and state to handle relocation within the economic structure
is an additional factor in the calculation. And still more strategic
complexity is added when the location and distribution of missile sites--

of counterforce targets--is mapped in the two countries and considered in relation to the cities.

Nonmaterial Asymmetries

The second major class of asymmetries in the capabilities of nations is not measurable by simple techniques--these asymmetries are not matters of geography, resources, population size or distribution, formal governmental and social organization, or industrial or technological competence. Yet they may determine the outcome of wars or competitions among states which are relatively equal in their material resources or capabilities. They may contribute decisively to the outcome of wars in which the losing side enjoys an initial advantage in those capabilities which are most easily measured and treated in a systems or operations analysis.

Assessments of national character--to take a very general expression for a grouping of real perceptions about a society--can never, of course, meet the demands of an empirical science, and even so brilliant and accurate an assessment as Toqueville's of nineteenth-century America may be deficient or wrong in detail, or an unreliable basis for the prediction of national behavior in uncharacteristic or unprecedented situations. But the behavior of a society over time does find expression in institutions, in systems of public administration, of public discussion, debate and the resolution of conflict, in systems of thought, of artistic creation, of education, of economic life, of the organization of production and finance, even of recreation, that can be identified and specifically investigated, and that relate to the nation's capabilities--for central war, certainly, but in all of its foreign activities as well.

The usefulness of drawing carefully limited conclusions from such data is apparent; the difficulties are also apparent. However, such conclusions intrinsically are neither more nor less difficult, neither more nor less reliable, when applied to individual situations as the more familiar military intelligence generalizations about the typical behavior or tactics of enemy units in specific situations--generalizations which are, after all, proximately or remotely related to the civil experience or institutions of the enemy troops.

Thus while it may not be very illuminating to tell a national decision-maker or planner that the French are a logical people, it may be significant and useful that he know that French philosophy is profoundly influenced by Descartes, and that the French educational system values Cartesian qualities--the ability to make precise definitions of problems, and to reason with strict logic--that French schools are intensely competitive and are oriented to the production of an elite for public service. These latter are all ascertainable facts, and from them and from the other facts that modify them it is possible to draw useful insights into the behavior of the French elite in certain situations, or about its characteristic behavior over a period of time in dealing with certain problems, about the manner in which it may be expected to formulate or analyze problems, and its competence to deal with given issues. An understanding of recent French behavior in Algeria or of contemporary French

nuclear policy is helped by such knowledge. Both instances demonstrate a commitment to logical positions--even to positions which to Anglo-Saxons, habituated to pragmatic thought, seem dangerously divorced from practical constraints--and both betray a pride and national competitiveness which is wholly consistent with other French national policies of the last century (some of them, surely, destructively competitive and proud).

The characteristic American concern for individual enterprise--or even the existence of a mystique of individualism and private enterprise existing within relatively centralized systems of business and production--provides useful and relatively reliable information about American national behavior in a range of matters beyond that of economic enterprise. It obviously is related, for example, to certain characteristics of the American military command system.

It also is obvious that the political and military conduct and strategies of the United States in the cold war, even though it is an international involvement of a scale without precedent in American history, nevertheless have been deeply marked by the political and social institutions and policies produced by the quite different American experience of the preceding century--by America's physical isolation, the characteristic maritime strategy imposed by that geographical isolation, the traditional American reluctance to commit large forces to continental wars abroad. And modern American weapons systems, of course, obviously demonstrate the influence of an American habit of relying upon technology and machines in a very wide range of ordinary situations, and the very high value placed in the United States upon individual life, and even upon individual convenience.

But not only American systems have been biased by this kind of factor. The modern Soviet emphasis on land armies and defensive weapons systems, upon the political and military control of the Central European approaches to the U.S.S.R., its sensitivity to foreign military bases near Soviet borders, and its apparent reluctance to commit its military forces outside the Soviet European Bloc, all would seem to express the national experience and tradition of a very large and relatively self-sufficient continental state with little maritime experience and a history of foreign invasions.

Central War Asymmetries

Such familiar matters are, of course, the data of classical strategic and political analysis. A distinction must be made between the study of these kinds of qualities or characteristics for the purpose of understanding or predicting the policies and actions of another state--a political and strategic intelligence function--and their analysis to determine, insofar as possible, military capabilities. The concern of this report, of course, is with the possibility and importance of the latter.

Some of the categories in which asymmetries may appear are the following. Comment is limited to some points which may clarify or define

the areas in which significant central war capabilities or inadequacies may exist.

1. Governmental tradition, as distinguished from the actual forms of organization of the government. Is there a habit of referring decisions to central authority? Has the government apparatus demonstrated an ability to respond quickly to unexpected events and to improvise? What is its competence to perform its regular duties?[8] What is its characteristic method of defining problems and formulating policy? What are its principal traditional and contemporary preoccupations? Are they domestic or foreign? If foreign, of what kind and expressed in what terms?

2. Social tradition, considered especially in terms of national, regional, communal, religious, or ethnic loyalties or orientation, the characteristics and traditions of civil (non-governmental) action and organization, attitude towards national government, towards national goals, national mission or destiny, towards official ideology. What are the characteristic national rankings of values? The last is an elusive and difficult subject for analysis, but its reality may be demonstrated by the following chart of three groupings of values reflecting three over-all habits of mind and action.

UNIT COMMANDER	SUCCESSFUL POLITICIAN	GOOD CITIZEN
Serious	Ambitious	Honest
Authoritative	Persuasive	Sincere
Loyal	Discreet	Trustworthy
Courageous	Calculating	Straightforward
Tough	Tough	Decent
Disciplined	Realistic	Law-abiding
Hard	Responsive	Responsive
Aggressive	Aggressive	Unaggressive
Stubborn	Flexible	Generous
Proud	Subtle	Friendly
Resolved	Tactful	Courteous
Inventive	Imaginative	Helpful
Austere	Hard-working	Easy-going
Purposeful	Likeable	Likeable
Competent	Patient	
	Sophisticated	
	Shrewd	

[8]The lack of competence in ordinary economic management in Russia in 1914 contributed to the Russian military disaster--according to Vagts, producing "inadequate preparations for wartime forces, a shortage of competent non-commissioned officers, and a consequent reckless expenditure of blood when fighting had to be done." (Alfred Vagts, A History of Militarism (revised edition) New York, 1959, p. 236.) The point is not to suggest a repetition of this phenomenon in modern Russia, though this is quite possible, but to illustrate the connection between peacetime competence and specific military deficiencies.

The first grouping, while its qualities are desirable in a fighting man, is also an aristocratic complex of values characteristic of certain so- cieties--or of the elites of societies which may, as a whole, adhere to another complex of values. Traditionally, the English "public" school is oriented to many of the qualities in this first grouping, schools concerned with the formation of an elite for public service.

The second grouping is appropriate to resolving conflict without di- rect confrontation--i.e., through negotiation or other method of adjust- ment. The third grouping of values in the chart is the one which informal polls suggest reflects the preferred values of American parents in choos- ing schools for their children. The values, unsurprisingly, are essentially those of a civil society and are directed towards minimizing conflict.

Yet it would be a mistake not to understand that the values of schools--and of societies--are variable and subject to drastic change or alteration, or that the permanence of certain values may produce a dra- matic reversal of others. The social cohesion and attitudes towards na- tional authority of Japanese society were, in 1945, responsible for a pro- found reversal of many Japanese attitudes towards Japan's wartime enemies, but also towards the institutions and values of that same Japanese society itself.

3. Characteristic intellectual forms in a society, identifiable in philosophy, religion and literature, and indicating, among other things, typical modes of analysis and of problem formulation and solution.

4. Characteristic intellectual attitudes, indicating beliefs about national goals and missions, war and violence, the international system and foreign societies and problems, and providing data on national com- mitment, morale, and assurance. This category obviously is intimately related to the preceding ones and is considered again in the discussion in Chapter X of the First Three Levels of Analysis.

5. Educational system characteristics: the values emphasized in the system (contributing to the analysis of social tradition and atti- tudes), typical or official intellectual methods and forms, the specific areas of knowledge and training emphasized or neglected.

6. Ideology. Is the ideology of the state--formal or informal-- competent to motivate realistic national action? Is it held by convic- tion or convenience by the elite? By the public? Is it static or capable of development? Is it able to provide satisfactory explanations or inter- pretations of current trends or events? (If it cannot do the last, or can do so only at the cost of implicit revisionism or a distortion of evidence, the result may be disorientation or erratic behavior.) A recent instance of central war capability being affected, at least in part, by an inade- quacy of ideology, was the U.S.S.R.'s lag in the early 1950's in reorgan- izing its military forces and doctrine to meet the changed conditions of nuclear war. This resulted from Stalin's insistence that "permanent

operating factors" of social organization and historical dialectic would
determine the outcome of a war between the Soviet Union and a capitalist
society. The influence of this ideologically inspired doctrine persisted
even beyond Stalin's death. It seems likely even today that the many
anomalies of the Soviet military establishment are due to the persistence
of institutional factors and attitudes that reflect Stalinist doctrine and
the experience of three great European wars[9] (Napoleonic and the two world
wars).

        7. Current political and military doctrine, considered for its im-
plicit components as well as its explicit assumptions and goals. This
may be of particular importance in situations where logic or apparent in-
terest would dictate one line of action but the actual doctrine of a state
dictates another. Doctrine should also be considered for its adequacy:
faulty doctrine may produce not only unreasonable or inefficient action,
but erratic, violent or disoriented reactions to situations.

        8. Current techniques. Asymmetries may exist in civil and military
techniques of administration, research, or operations, leading to signifi-
cant advantages or lapses in political and military policy, in weapon sys-
tems' development, or in tactics. There may finally be asymmetries in
the competence of armies to understand and use the new techniques that
exist. (Among the best known examples of this are the early failures
properly to use airpower, submarines, ironclad naval vessels, and tanks.
In 1915 Winston Churchill described "land cruisers" to a French general
officer, and when he had left the Frenchman remarked to a British colleague,
"your politicans are even funnier than ours."[10] The conservatism of gen-
erals, general staffs, and of military establishments as a whole is pro-
verbial, and it would be rash to presume that it no longer exists.)

        If U.S. systems were systematically designed to exploit and hedge
against the above possible asymmetries they would look very different from
what they do now. Some of the possibilities are discussed in the accom-
panying classified reports.

        But having suggested some of the categories in which the less easily
measured asymmetries of nations may exist, let us analyze one of them in
some detail for its effects upon central war capability. There are atti-
tudes towards force and international conflict that are peculiar to the
Soviet Union and that reflect both the Russian national experience and
Soviet ideological commitments.

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        [9]It has come as a distinct shock to Western theorists how much the
Soviets have concentrated on defense over offense and neglected intercon-
tinental capabilities (including such elementary things as refueling) for
counter-Europe capabilities. No Westerner, in the mid-late fifties, would
have predicted that the Soviets would, in the early sixties, have hundreds
of IRBM's facing Europe (to add to their thousands of medium and fighter
bombers), while they would have only tens of ICBM's facing the U.S.

        [10]Vagts, op.cit., p. 232.

Some Characteristics of Soviet Thinking on War

According to Engels, commenting on Clausewitz whom he admired, "To the question whether war should be called an art or a science, the answer given is that war is most like trade. Fighting is to war what cash payment is to trade, for however rarely it may be necessary for it actually to occur, everything is directed towards it, and eventually it must take place all the same and must be decisive."

Engels' comment is useful. It first of all indicates the matter-of-fact attitude which Marxists habitually adopt toward war; they do not regard war as the occasion for heroics but as a utilitarian device. The comment is also a warning: no matter how much we may theorize about the nature of a future war, or the behavior of a putative opponent in such a war, speculation remains abstract until the "settlement day." While much about future Soviet behavior may be deduced from political and military behavior to date, it is important to bear in mind that so far as the evidence relates to large-scale modern war, the actual evidence antedates the onset of the nuclear age; and Soviet behavior since 1945, that is, since the opening of the nuclear age, can only, as an empirical matter, be discussed at the lowest rungs of the escalation ladder.

Finally, it is important to remember that Soviet society, like any modern society, is in a state of constant flux. The Soviet state is more than a revolutionary conspiracy operating, almost by accident, from a particular national (Russian) base. There is no more dangerous error than mechanically imputing to the post-Stalin apparatchiki who now rule the Soviet Union the motives and habits of mind displayed by revolutionary conspirators before 1917-18 or Red Army generals in the Civil War or even the recent Second World War.

Nevertheless, these comments will assume that, making all due allowances for change, certain features of Soviet behavior in war (or prewar) and certain ways of looking at force are likely to endure. In short, we take the position that there is a Soviet style in war, neither identical with, nor wholly different from, the Russian style of war which predated it.

Fundamental Soviet Style

The Soviet style in conflict situations and war may be summarized as follows:

(1) a utilitarian conception of war as an instrument of policy;

(2) a conception of war as a normal, not an abnormal, condition of society, an inevitable condition so long as class "contradictions" remain;[11]

(3) a belief in war as part of the total social conflict between two states--an expectation that war quickly translates itself into a clash of ultimate values, testing the strength and cohesion of the combatants;[11]

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[11] But see Khrushchev's remarks quoted on page 88 on the possibility of Omicron (non-war) Worlds.

(4) a belief in "objective" or material factors, as distinct from "idealist" or "subjective" factors, in determining the motivations, aims, and behavior of an opponent;

(5) a commitment to "objective morality"--that is, a disavowal of all idealist conceptions of morality and a fundamental belief that what is "good" advances the class struggle, or the Soviet interest, as against what is "bad," which does not;

(6) a high regard for prudential strategies--a dislike for risk-taking on the offensive and a willingness to compromise, to cut losses, if necessary;

(7) a belief, perhaps now somewhat eroded, in the inevitability of Soviet victory, and a parallel sense of time--"Russia has time"-- as an aid to prudence and patience;

(8) a predilection for proxy wars as a means of damping down the escalatory nature of war-like acts;

(9) a direct experience, in contrast to the United States, of ultra-large and bloody wars, and an experience, in World War II, of the ability of the Soviet society and state to survive losses.

War as an Instrument of Policy

The traditional American understanding of war is that the act of war is fundamentally immoral unless undertaken against an evil opponent; in such a case, evil is to be expunged utterly. We will discuss some of the implications of this attitude in Chapters X and XI. We just note here that this attitude is almost the reverse of the utilitarian conception of war which the Soviets hold. Their understanding of war as a utilitarian device derives from Marx and Engels, who in turn were profoundly influenced by Clausewitz. While Marx and Engels (and Lenin as well) cannot be cited uncritically to demonstrate the nature of current Soviet thinking, their philosophical works do underlie most contemporary Soviet thinking about the great issues of war and peace.

According to Clausewitz:

> We see, therefore, in the first place, that under all circumstances War is to be regarded not as an independent thing, but as a political instrument [that is, an instrument related to both peace and war]; and it is only by taking this point of view that we can avoid finding ourselves in opposition to all military history. This is the only means of unlocking the great book and making it intelligible. Secondly, this view shows us how Wars must differ in character according to the nature of the motives and circumstances from which they proceed.[12]

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[12]Major-General J.F.C. Fuller, The Conduct of War 1789-1961 (New Brunswick, New Jersey: Rutgers University Press, 1961), quoted on p. 203.

Lenin "like Engels...had read, annotated, and pondered Clausewitz. Speaking of the latter's 'famous dictum' that 'war is politics continued by other (i.e., forcible) means,' Lenin said: 'The Marxists have always considered this axiom as the theoretical foundation for the meaning of every war.' He believed, furthermore, that there was an intimate connection between the structure of the state and the system of government, on the one hand, and military organization and the conduct of war, on the other."[13]

War as a Normal Condition of Society

Related to, but not identical with, the Soviet conception of war as a utilitarian device is the basic Marxist world-view which presupposes a normal state of conflict. In this view thesis and antithesis, two fundamentally opposed concepts, battle uncompromisingly: according to Marx, the old order (capitalist) is the thesis, and the proletarian revolution the antithesis. From the total conflict which both must wage emerges a synthesis, or post-revolutionary classless order in which alone conditions of permanent peace are possible.

It is orthodox Marxism-Leninism that the conflict between thesis and antithesis expresses itself equally in the domestic arena and on the international plane--in conflict between states: with the success of the Bolshevik Revolution in 1917 what was previously an internal social conflict became a polarization of forces in international life--the U.S.S.R. against the external world, and, after 1945-48, the "Peace Camp" (or Soviet Bloc) against the external world.

The belief in inevitable war between capitalism and socialism is, however, much eroded today. The concept of inevitable war is one of the points at issue between the Soviets and the Communist Chinese. N.S. Khrushchev:

Peaceful coexistence must be correctly understood. Coexistence is a continuation of the struggle between the two social systems, but a struggle by peaceful means, without war....We consider this to be an economic, political and ideological struggle, but not a military one.[14]

War as a Total Social Conflict

The idea of total conflict necessarily derives from the classical theoretical positions outlined above. For a more modern expression of

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[13] Edward Meade Earle,'Lenin, Trotsky, Stalin: Soviet Concepts of War," in Makers of Modern Strategy, Edwin Meade Earle (ed.), Princeton, 1941.

[14] Pravda, Moscow, October 11, 1959.

this view, as recently as 1962, see this quotation from Soviet Military Strategy, a text edited by Marshal V.D. Sokolovskii:

> V.I. Lenin insisted that war is part of a whole and that whole is politics....Lenin's proposition is extremely impor- tant and basic; it takes note of bourgeois theories of the com- prehensive, all-encompassing nature of war and of 'class peace' during war. It explains that even during war, politics continues; that is, class relations do not cease, and the class conflict con- tinues in every way.... (RAND edition, pp. 270-71)

Thus the Soviets would have no difficulty in thinking of an ACWS as part of a BNSP; they are much less likely to compartmentalize the 27 areas on page 26.

Importance of "Objective" Conditions

Classical Marxist theory denies the subjective; it holds that deci- sions are made on a class basis: that is to say, values, opinions, and resolve, to name only three factors relevant to the escalation and bar- gaining process, are determined by the class outlook of the opponent. This determinism operates even when the opponent (as the United States president at Yalta) believes himself subjectively to be a progressive personality. Consequently, as at Yalta, true bargains cannot be struck with the bourgeoisie (or bourgeois states) except temporary ones where the "objective-materialist" factors conduce to a short-term identity of interests. Protestations of good faith, as well as assertions of the morale and political cohesion of alliances and states, are thus to be evaluated in purely materialist terms. It is possible, however, that this article of faith is somewhat weakened in the Soviet Union today where more practical considerations (e.g., abating economic strains generated by the arms race) militate against orthodoxy.

Commitment to "Objective" Morality

The parallel to this philosophical position is the cynical denial of traditional morality, so that as an official matter Soviet leaders in war could not be expected to be bound by traditional ethical restraints. For the Soviets war, as a utilitarian act, must be proportionate to the aims of the war; but deception, violence, and atrocities (including ultra- large nuclear devastation attacks) need not be rejected on "idealist" principles. The sole test of the "positive" as against the "negative" is utility to the progress of revolution. In the past a bargain could be struck with Fascists where this was seen as useful to the ultimate cause of revolution; millions of innocents were sacrificed as a regrettable nec- essity in order to build the strength of the bastion of revolution; inno- cent men were condemned wholesale.

One quote from Lenin will suffice:

> We repudiate all morality derived from non-human and non- class concepts. We say that it is a deception, a fraud in the

interests of the landlords and capitalists. We say that our
morality is entirely subordinated to the interests of the
class struggle of the proletariat....We say: morality is what
serves to destroy the old exploiting society and to unite all
toilers around the proletariat, which is creating a new Commu-
nist society....We do not believe in an eternal morality.[15]

Prudential Strategies

There does not seem to be any Soviet (as distinct from <u>Russian</u>) doc-
trine of glory or military honor. Victory is important; even more impor-
tant is to avoid a catastrophic defeat. This prudential character of So-
viet strategy has been much dwelt upon by Nathan Leites in <u>The Operational
Code of the Politburo</u> and seems reasonably consonant with observed fact.
The classic example of Soviet prudence and willingness to accept limited
defeat to avoid worse is the Brest-Litovsk treaty. See also, V.I. Lenin,
<u>Left-Wing Communism, An Infantile Disorder</u>, in which he stated: "To re-
ject compromise on the grounds of principle is childish." Soviet aphorisms
tend to refer less to "Give me liberty or give me death" themes and more to
"One step backward, two steps forward," or "Don't let the enemy provoke you
into self-destructive behavior," or "Communism is too important to throw
away in anger."

All of the above indicate the importance the Soviets ascribe to keep-
ing control of one's emotions--an understandable reaction to the traditional
Russian national character. However some of the Tsarist governments had
similar characteristics so this is one area in which the new Soviet man, at
least at the Presidium level, may not be so different from some of his
predecessors.

"Russia Has Time"

The Soviet predilection for prudential strategies (and their conse-
quent distaste for nuclear war, by definition high-risk war) is bolstered
by a traditional Russian belief in a more modern Marxist one. The Soviets
have inherited the messianic conception of Russia as Third Rome,[16] and
share as well the Marxist belief in apocalyptic historical certainty. It
may be that recent rebuffs on the international scene have somewhat, but
not entirely, moderated this Soviet view.

It should be noted that predestinarian doctrines, while often in
their inception a license to violence, may be a convenient rationale for
passivity if a movement is ultimately too often rebuffed by reality.

Penchant for Proxy Wars

Since there is a positive injunction against risking the Soviet Union,
the bastion of revolution, the homeland of the working class, in rash mili-
tary adventures, the Soviets, since 1945, have tended to stimulate, or to

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[15]V.I. Lenin, "Tasks of the Youth League," <u>Collected Works</u>, Vol. XXXI.

[16]Cf., the words of the monk Theophilus of Pskov to the Grand Duke
Basil III of Moscow: "Two Romes have fallen; the Third stands fast....
A fourth there cannot be."

manipulate "national liberation," or proxy wars. Examples are legion:
the KKE insurrection against the Royal Greek Government, mounted by the
local Communist Party supported by Bulgarian, Yugoslav, and Albanian
covert forces or logistics; the Viet Minh insurrection against the French
in Indo-China; the Hukbalahap insurrection against the central Manila
government in the Philippines; the Pathet Lao in Laos. See the table on
the following page for an annotated chart of proxy (and semi-confrontation)
wars since 1945.

Demonstrated Ability to Survive Heavy Losses

It is reliably estimated that the U.S.S.R. sustained losses of more
than 20 million in 1940-45. If so, this is an impressive demonstration of
Soviet cohesion in the face of extreme hardship; and it is a demonstration
which may be expected to affect Soviet calculations of their ability to
survive a nuclear exchange. This point is somewhat reinforced by the un-
derlying notion that war between the Soviets and any external enemy is a
testing of the fundamental qualities of a society--which, in the Soviet
case, are held, as an article of faith, to surpass any other.

An indication of some of the consequences of these Soviet attitudes
may be provided by the hypothetical Soviet Escalation Ladder given earlier
on page 154. As the discussion in the report by Ed Stillman (see note on
page 153) details, this ladder significantly differs from characteristic
American ladders in being directed far more to obtaining political effects
through violence (for example, in being designed to break up enemy alli-
ances or to produce the disaffection of enemy populations from their gov-
ernments through the attacks at rungs 16 through 24), and in ignoring many
of the military subtleties of corresponding American ladders.

One can characterize much Soviet military thinking as being basically
motivated by "experience" and common sense--but an experience and common
sense that is almost unaffected by much modern thinking and that has its
roots in a doctrine and past history. Whether it will turn out that
American theorizing has been too untrammeled or Soviet theorizing too
conservative, the postures and concepts differ greatly. U.S. strategists
looking at the Soviets and their concepts tend to characterize them as
MD, FD, CH, NMR, PMR, CFS and so on, even though the very use of these
kinds of characterizations is an Americanization. Thus, while the Soviets
have emphasized defense over offense, which is counter to the spirit of al-
most all of these ACWS's, we would still tend to score the resulting sys-
tem as given above.

SOME PROXY AND SEMI-CONFRONTATION WARS ARRANGED
IN ESCALATION SEQUENCE (A SOVIET VIEW)

Quasi-Central
War

9. P + USSR ("Vol") vs. P + US

Hypothetical: East Germany + Soviet "Volunteer" Forces
vs. West Germany + US

8. p + USSR ("Vol") vs. p + US

Hypothetical: Tudeh + Soviet Tadjik "Volunteer" Forces
vs. Royal Iranian Government + US

Semi-
Confrontation
War

7. p + P vs. p + US

North Korea + Chinese Communists vs. ROK + US

6. p + p vs. p + US

KKE + (Yugoslavia + Bulgaria + Albania) vs. Royal
Greek Government + US

5. p vs. p + US

Viet Cong vs. South Vietnam + US

Proxy
War

4. p + P vs. P

Viet Minh + Chinese Communists vs. France

3. p + p vs. p + P

KKE + (Yugoslavia + Bulgaria + Albania) vs. Royal Greek
Government + England

2. P vs. P

Chinese Communists vs. Kuomintang

1. p vs. p

Hukbalahap vs. Philippine Central Government

p = proxy
P = major proxy

CHAPTER VIII

TWO-SIDED CENTRAL WAR POSTURES, SYSTEMS,
CAPABILITIES AND TACTICS

We are now at Level Six which (according to page 43) is the special province of operations researchers, weapons designers and professional officers. Actually, we will find that other professions are of importance here too, such as economists and engineers and scientists, but this is because Levels Six and Seven are closely connected.

According to the chart on page 54, we are supposed in this section to consider such subjects and corresponding organizations and equipment in seven areas as follows:

> 1. Offensive Weapons Systems
> 2. Active Defense Systems (including warning)
> 3. Civilian Defense Systems
> 4. National Command and Control
> 5. Pre-War Intelligence Capabilities
> 6. Tactical Skill
> 7. Adaptability

Most of the discussion of 1 and 2 is classified and will be found in the accompanying Alternative Central War report. Similarly, there will be a fairly extensive discussion of civil defense systems both in the Alternative Central War and the Civil Defense reports. However, it is useful to give here a very rough description of how civil defense programs might perform and we will do so. We will also consider in some detail number 6, Tactical Skill, but have relatively little discussion of the other items in this report.

Level Six itself can often be broken down into a series of sub-levels. It is useful to do this before continuing the discussion. Consider, for example, Figure 1 which indicates a simple description of a Central War force composed only of ICBM and CD systems. (The arrows on the diagram indicate that information flows both ways.) It will immediately be noted that on the civil defense side there are at least three sub-levels for Level Six which we can call Levels 6.1, 6.2, and 6.3 respectively. At the first (6.1) there are senior national civil defense authorities who must see to it that there is a proper over-all balance between the various local areas and report to OSD what has been done and what is needed. Secondly, there are designers and operators at any particular local area A_i who must supervise and set criteria for designing an integrated local system of such components as shelters, movements, warnings, support, command and control, and so on. Finally, at Level 6.3 (or lower) work is done on these components. Those in charge of central war forces, who must trade between civil defense and ICBM's, will normally be assigned to Level Five. We have indicated that there are three levels of civil defense at 6.1, 6.2, and 6.3, yet it is clear that if we look into any of the specific boxes at 6.3 (such as shelter, movement, warning) we will find activities which we could label as
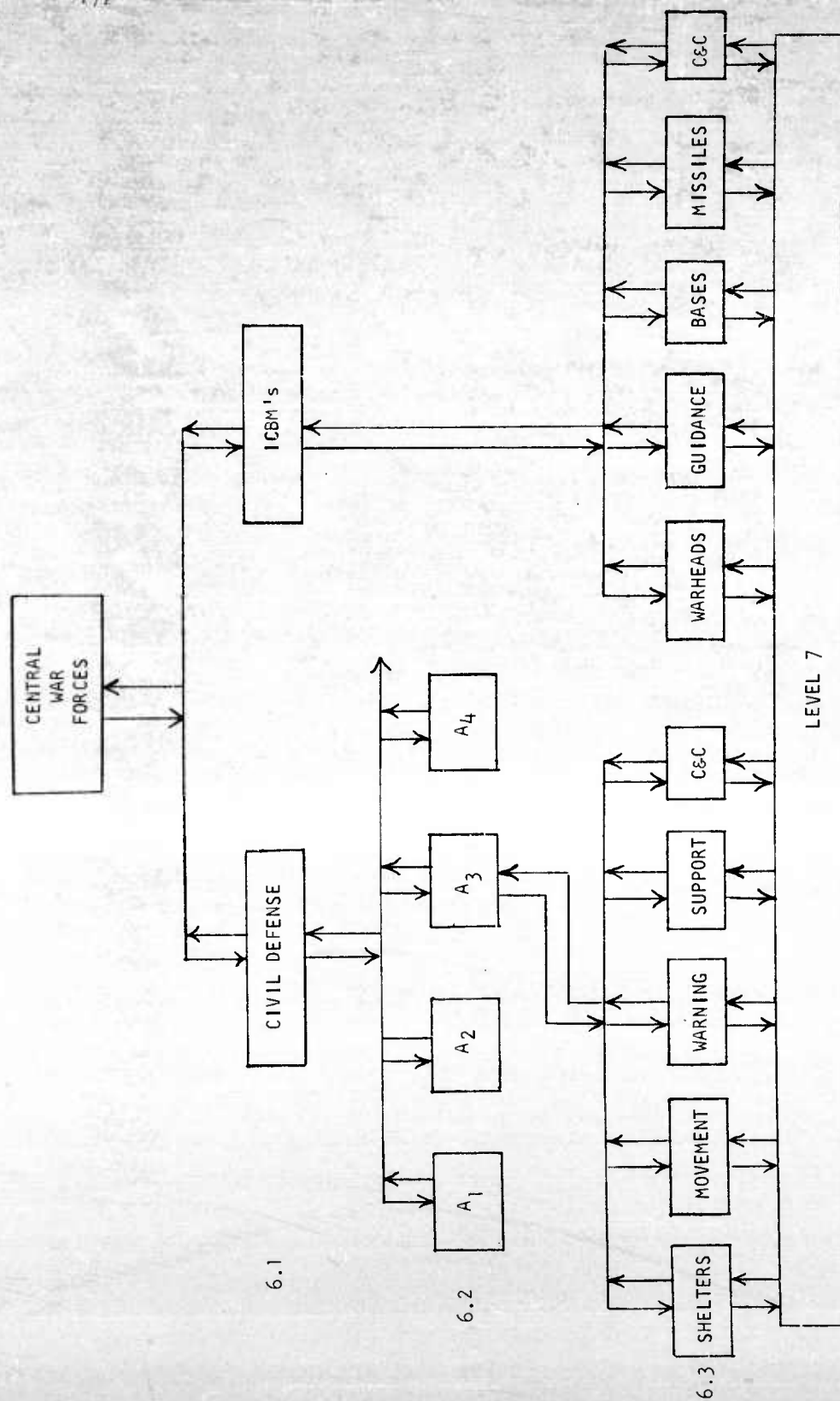
Figure 1. Simple ICBM-CD System

further levels. We could have made these 6.4, 6.5, and so on, but in the scheme as shown on the chart we would probably and somewhat arbitrarily label them 6.3.1, 6.3.2, 6.3.3, and so on. At these further levels there will also be engineers, economists and other technical groups working with the operations researchers and service officers.

It is the first job of all the planning people in the organization chart (Figure 1) to get together and consider what might be a preferred allocation of money between offense and defense. The defense money would then be allocated to various areas, A_1, and then it would be allocated among the various functions such as shelters, movement, warning, support, command and control, and so on. We will consider first the preferred allocation between the various defense areas, A-1, A-2, A-3, etc., and do this in only enough complexity to illustrate some important general principles.

In Chapter IV when we discussed the clarification of current choices and contingency design, we indicated (pages 66-68) that the question of optimization was a conceptually complicated one and, in fact, we do not use the term "optimized" but only "preferred." All that is claimed is that it is difficult to find another system which should clearly be more preferred, not that the recommended system is in fact an optimum. In trying to see how to design preferred systems, however, it is useful to start with simple optimization type problems. This gives one certain general principles which then have to be applied with some intelligence and care to practical situations.

Let us consider first the simple problem of an enemy's missiles attacking our passive defenses (or vice-versa). He might send the first missile to the most lucrative target, the second missile to the next most lucrative one, a third missile to the next, and so on. Such curves often have regions of constant slope (such as β_1 and β_2 on Figure 2) when there are large numbers of equally lucrative targets; a typical situation is shown in Figure 2 below.
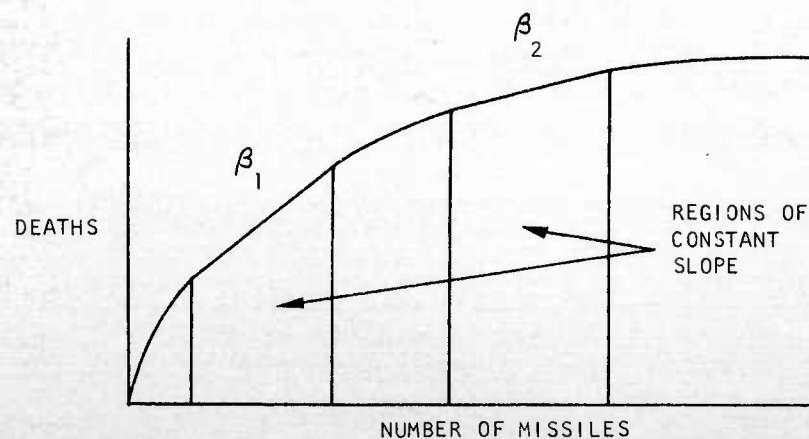
FIGURE 2.

Actually, assigning missiles in this simple, one-step fashion may
not result in an optimum assignment. For example, consider the situation
in which there are a number of cities, say N, all of which are one-dimen-
sional, each having a gaussian population distribution. A sample distri-
bution is shown below.
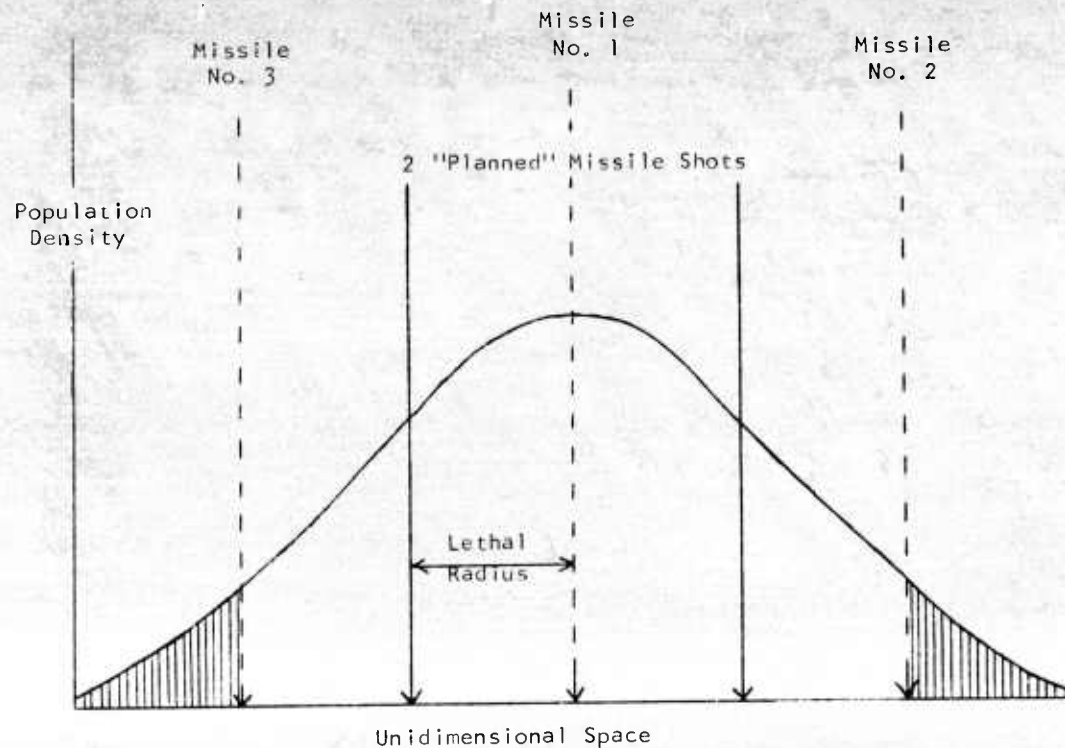
Figure 3

Suppose the attacker has a number of missiles equal to or less than the
number of cities (N). The first and optimal point to aim at is the center
of the gaussian that has the largest peak among all the distributions. If
the population distributions are all of roughly the same shape, the at-
tacker's best strategy is to place a missile at each of the peaks. How-
ever, if the number of missiles exceeds the number of cities, then it is
inefficient to place the first missile on the center of a guassian. One
would have to shoot two further missiles to pick up the fringes later.
If it were known that one was going to go that far, one would have shot
two missiles at this gaussian curve to begin with, putting them on both
sides of the center without aiming at the center at all. The destruc-
tion per missile would clearly be increased.

The result of trying (prematurely) to take maximum advantage of the first city by targeting its most dense region is therefore to spoil this target for further use, if one has enough missiles to retarget the city in subsequent attacks. The problem of spoiling a target, by initial over concentration on it, has its analog in the problem of deciding in which cities one should put civil defense shelters to best advantage. This second optimization problem will be considered in more detail later. However, it may be noted here that, under some interesting conditions, it is possible to start the allocation of passive defenses in an optimum way without noting from the start exactly how many areas one will defend. Thus the possibility of spoilage, in the sense described above, does not occur in this second problem.

The above illustrates that there can be a difference in efficiency between allocating missiles to targets successively, and an allocation that takes account of the entire target list and assures the greatest return per attack. If we take β as the least lucrative target that is worth shooting at, then, referring to Figure 3, if the sum of the shaded areas is $< \beta$, the two missile attack is more efficient, in terms of the over-all attack, because the third missile can then be launched at a target that will return β or so.

This is a very familiar problem. It is necessary to know what is going to happen to the whole system before one can decide how to optimize a local attack. This turns out to be equally true when one considers the problem of defense. The allocation of money between New York, Baltimore and Philadelphia depends not only how they might be attacked, but also on the prospects of other, smaller cities, and the role that such smaller cities would play in the over-all attack. At first sight this means that the operations researcher will have an extremely difficult job in working out the optimization of either the attack or the defense. There are, however, a number of algorithms which, when applied to relatively simple models, greatly simplify this task. Some of these algorithms are exact, others are approximate. Let us consider first a simple problem in which we are trying to allocate a fixed sum of money for civil defense shelters in different cities. Assume that one bomb is necessary to destroy a city completely. All that we can do with shelters is protect people on the outskirts of the city; and the larger the city, the greater the building costs--it takes more to save a life on the outskirts of a large city than of a small city. Assume also that a shelter protects a person completely; a bomb dropped on a city in which part of the people are protected kills all unprotected people and leaves untouched the people in shelters. We now have a peculiarly simple problem which, while very specialized, still has many of the qualitative features of more complicated problems. We can start with the curve shown in Figure 4, labeled OLD CURVE that indicates how many fatalities there would be as a function of the number of missiles if all cities were unprotected. Let us designate the population

of the n-th city by P_n, and assume that the cities have been rank ordered according to size: $P_1 > P_2 > P_3 > \ldots$. We shall suppose that the attacker has N missiles and that the defender knows this. Thus, in terms of the unprotected population, the attacker would not place a missile on a city below P_n in the list of cities.
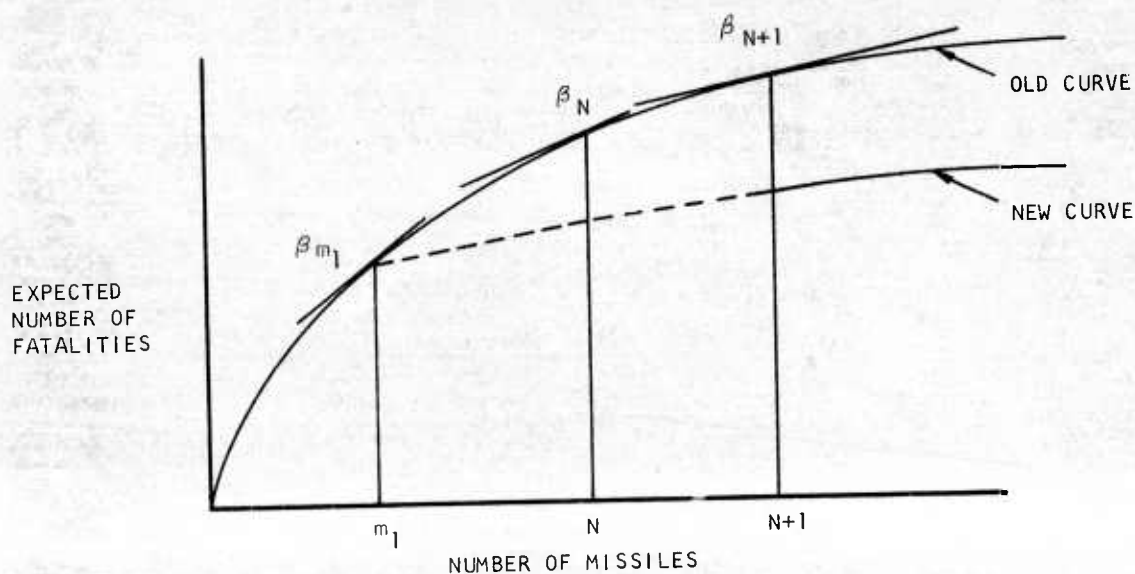
FIGURE 4.

In Figure 4 are shown several tangents, β_{m_1}, β_N, and β_{N+1}, placed on the old curve for numbers of missiles $n = m_1$, N, and N + 1. If the attacker has only, say, $n = N$ missiles, then the slope of the tangent β_N represents the least lucrative target for the attacker; and clearly $\beta_N = P_N$, where P_N is the population of the N-th rank-ordered city. Still considering the unprotected population, we know that no missile will be placed on city P_{N+1} (or any smaller city). Now assume that the defender is given a total of D dollars with which to protect his population. His problem is then to allocate these D dollars in the best way, subject to the constraints of our simple model. We can now outline the algorithm that tells the defender exactly how to proceed. Since it is cheaper to

protect people in the smaller cities, the defender first buys shelters for
city P_N, and in fact defends $P_N - P_{N+1}$ people in city P_N, thereby reducing
its vulnerability to that of city P_{N+1}. Going to city P_{N-1}, he protects
$P_{N-1} - P_{N+1}$ people, the vulnerability of city P_{N-1} now also being reduced
to that of P_{N+1}. Now designate the cost per person of defending people in
the i-th city by C_i. The defender continues protecting people in cities
P_{N-2}, P_{N-3}, ... until he first comes to a city, which we shall designate
as m_1, such that $C_{m_1} = C_N + C_{N+1}$ (the significance of C_{m_1} will be explained).
If there is such a city, $P_{m_1} - P_{N+1}$ people in it are defended. However,
if there is money remaining after this additional expenditure, it is now
more efficient to go back and invest more money in cities N and N+1 than
to reduce the vulnerability of city $m_1 + 1$, since, by hypothesis C_{m_1+1}
$> C_{m_1} = C_N + C_{N+1}$. Let D_1 be the total of the defender's expenditures so
far. Recalling that D is the total amount he can spend, he must consider
whether $D = D_1$, $D < D_1$ or $D > D_1$. If $D = D_1$, the resulting vulnerability
curve is as shown in Figure 4, labeled NEW CURVE. The quantity β_{N+1} is
the vulnerability to which cities from P_{m_1} to P_N have been reduced
$(\beta_{N+1} = P_{N+1})$.

This new curve is:
        identical to old for $o \leq n \leq m_1$,
        of constant slope β_{N+1} for $m_1 \leq n \leq N + 1$,
        of same shape as old curve for $n \geq N + 1$.

In the above process it could have turned out that $D < D_1$; i.e., the
budget is overspent. In this case the dotted line of Figure 4 does not
go to m_1, but to $m'_1 > m_1$, and the new curve is raised appropriately.

Now suppose that we defended down to P_{m_1} where $C_{m_1} = C_N + C_{N+1}$, and
$D > D_1$. Since it is cheaper to defend in smaller cities, we do not go on
to defend city P_{M_1+1}, but return and invest more money in city P_N, and
city P_{N+1} as well: the procedure is to reduce the vulnerability of P_N
and P_{N+1} to that of P_{N+2}. With this new investment, let the total ex-
penditure so far be D'. If $D = D'$, the new vulnerability curve is as
shown in Figure 5.

β_{N+2}

OLD CURVE

NEW CURVE

EXPECTED
NUMBER OF
FATALITIES

m_1 N   N+1   N+2
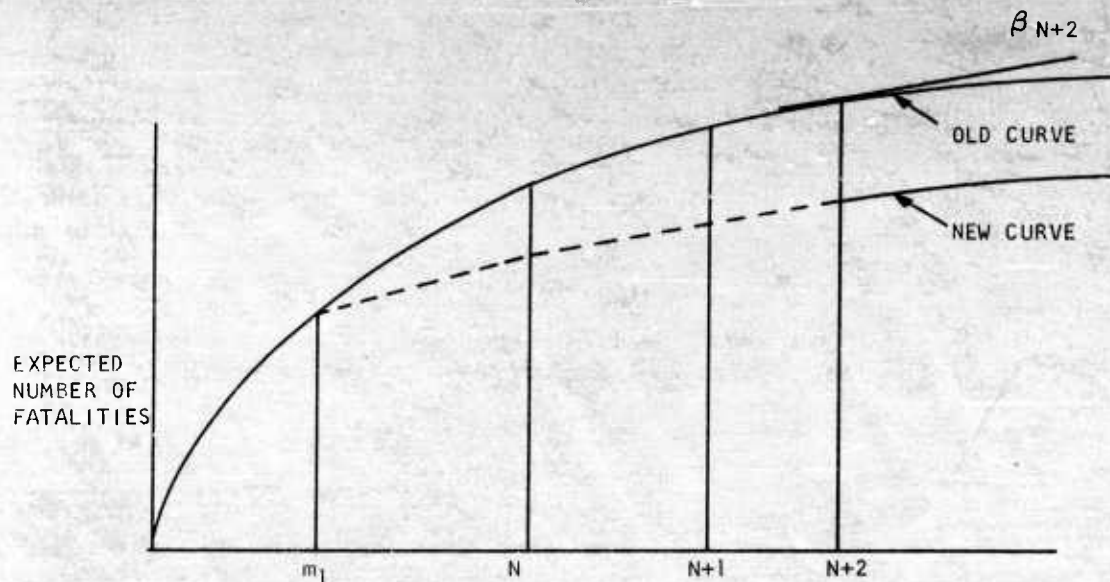
NUMBER OF MISSILES
FIGURE 5.

The new curve is:
    identical to old for $o \leqslant n \leqslant m_1$,
    of constant slope β_{N+1} for $m_1 \leqslant n \leqslant N$,
    of constant slope β_{N+2} for $N \leqslant n \leqslant N + 2$,
    of same shape as old curve for $n \geqslant N + 2$.

Since the attacker has only N missiles, he may shoot at the first N - 1 cities, and then either city N, N + 1, or N + 2, the latter three being of the same vulnerability.

If it had turned out that the new expenditure in cities N, N + 1, and N + 2 were such that $D' > D$, then the defender must accept the vulnerability curve of Figure 4.

On the other hand, if $D > D'$, the defender alters the vulnerability curve of Figure 5 by first reducing the vulnerability of cities N - 1, N - 2, and so on, to that of cities N, N + 1, and N + 2. He continues this spending until he either reaches city m_1 or does not. If there is exactly enough money to protect people down to city m_1, the resulting vulnerability curve is the same as the old curve for $o \leqslant n \leqslant m_1$, has a constant slope β_{N+2} for $m_1 \leqslant n \leqslant N + 2$, and is of the same shape as the

old curve for $n \geq N + 2$. If he does not reach city m_1, he will protect down to some city $m'_1 > m_1$, and the curve will again have two straight-line segments of different slope.

Suppose the number of dollars D is such that the defender can re-duce all cities between m_1 and $N + 2$ to the same vulnerability β_{N+2}. If this total expenditure is, say, D'' and D > D'' (we have already considered the case D'' = D above), then the defender starts protecting people below city m_1, reducing such cities to vulnerability β_{N+2}. According to our algorithm, he must continue this process until he reaches a city m_2 whose shelter cost per person C_{m_2} is such that $C_{m_2} = C_N + C_{N+1} + C_{N+2}$, and then go back and reduce the vulnerability of cities N, N + 1, and N + 2 to that of N + 3. But it is now clear how this calculation would proceed. We therefore assume there is no such city m_2. The defender then con-tinues to reduce the vulnerability of cities below m_1 until he either reaches a city $m_2 \leq m_1$ where he runs out of money, or he has sufficient money to reduce the vulnerability of all cities below β_{N+2}, in which case the final curve is as shown below.
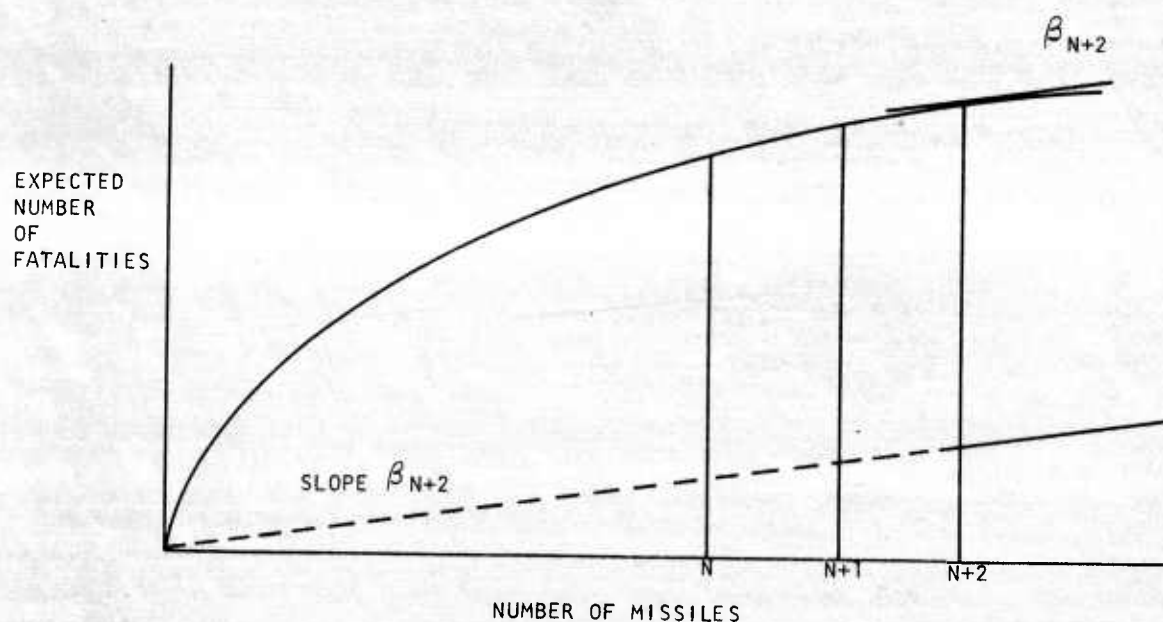
Let us now suppose the defender shelters people according to one of
the vulnerability curves we have just described; for example, consider
the new curve of Figure 4. It should be clear that if the attack con-
sisted of fewer than m_1 missiles, no one would have been saved by the
shelters; and if the attack involved more than N missiles, all the shel-
ters are used and the maximum saving of lives occurs. It should also
be clear that if, for some reason, we had used a β in the sheltering
program that was too large, the saving of lives would occur sooner (for
small attacks) than would have occurred for the correct β; while the
maximum to be saved in larger attacks would be less than for the cor-
rect β.

Let us now consider another problem in the optimum allocation of
passive defenses that is more complicated than the one described above.
There is also an algorithm that is appropriate for this new problem,
that is exact for this simple but relatively realistic case of missiles
against passive defenses. The problem can be stated formally as follows:

Let there be I physically separable local areas, some or all of
which will be defended. Suppose these I areas (or some subset of
them) have been attacked. Let ϕ be the total population or prop-
erty surviving, or some weighted index of these things. Let ϕ_i be
what survives in the i-th local area, d_i the dollars spent on the
i-th local area, and n_i the number of missiles the enemy will
launch at that area. Assume the defense has a fixed budget of D
dollars, and the enemy has a fixed offensive force of N missiles.

Given: 1. $\phi = \sum\limits_{i=1}^{I} \phi_i \ (d_i, \ n_i)$

2. $\sum\limits_{i=1}^{I} d_i = D \quad (o \leq d_i \leq D) \quad (d_i \text{ is continuous})$

3. $\sum\limits_{i=1}^{I} n_i = N \quad (o \leq n_i \leq N) \quad (n_i \text{ is integral})$

Problem: 4. First choose a set of d_i subject to constraint 2
(i.e., allocate D dollars among the I areas).

5. Choose a set of n_i subject to constraint 3 such
that ϕ is minimized (i.e., let the enemy choose
his most efficient attack for the above choice of
d_i).

> 6. Pick that set of d_i that maximizes the minimum
> $\phi(d_i)$. Call this maximum $\phi = V$. Then V is the
> value and the corresponding d_i and n_i are the
> solution.[1]

The interpretation of the above is very simple. On the defense we allocate our money in such a way as to minimize the damage. But we cannot know this damage until we calculate what the offense will do. So we (conceptually) do line 5 for every possible allocation of the D dollars and then pick the Maximum of the Minimums which the offense has achieved. This assumes that for every d_i we do, the enemy will be intelligent and launch according to his best n_i, calculated on the same criteria. The above assumes that the money has to be spent in peacetime before the attack and that the offense knows how the money is spent. The defense has some idea as to the size of the opposing force, but that is all. This why we call it a max-min problem rather than a min-max or a game theoretic problem. (Note: if both allocation choices were made at the same time and each side were ignorant of the other's allocation, then it would be a game-theoretic problem and we would have a probability distribution over d_i and n_i as the solution, while if for some reason the offense had to design

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[1]Note to mathematicians: In order to define parameters and introduce useful language, let us assume that the solution to the above problem has a saddle point.

> Let d'_i, n'_i be a solution.
> Using lagrangian multipliers, λ_1 and λ_2,
> form function $\phi - \lambda_1 \sum d_i + \lambda_2 \sum n_i$.

Because of condition 5, the above evaluated at $n'_i + 1$ - the value at n_i' must be $\geq$ o or

$$\phi_i (d'_i, n'_i + 1) - \phi_i (d'_i, n'_i) \geq -\lambda_2 \text{ or}$$
$$\phi_i (d'_i, n'_i) - \phi_i(d'_i, n'_i + 1) \leq \lambda 2 \dots (A)$$

Implications: Always add missiles to the target until return is less than λ_2 (i.e., λ_2 is just the β of the text (to be defined).) Choose λ_2 so that $\sum n'_i = N$, with $n'_i = n_i'$ (d_i, λ_2).

Also: $\dfrac{\partial \phi_i}{\partial d_i} \leq \lambda_1 \dots (B)$

If ϕ_i is people, the above implies that we keep adding money as long as more than λ_1 people are saved per dollar. Thus λ_1 is the reciprocal of the α of the text (to be defined). One can now choose λ_1 (or α) so as to make the $\sum d_i$ equal to D. However, because of the interaction between the n'_i and d_i, the above must be modified as indicated in the text to get a rigorous solution. Note that the two inequalities (A) and (B), plus constraints (2) and (3) above, are all that one needs to solve this particular problem. In simpler problems involving the use of Lagrange multipliers, the relations (A) and (B) usually appear as equalities. However, because of the end points (o, D) in constraint (2), and (o, N) in constraint (3), we must use the inequalities rather than equalities for determining a solution.

its attack and let the defense know its fixed attack ahead of the time the defense spends its money, then it would be a min-max problem.)

The algorithm for the practical solution of the above problem goes as follows: We define two quantities which we will call α and β. α can be thought of as the maximum sum of money which we are willing to spend to save one life in the scenario we are thinking about, and β is the minimum number of people that the enemy feels is a lucrative target for a missile. In other words, α represents in some sense the marginal effort of the defense and β the marginal effort of the offense. They also represent the operating exchange rates, α telling us how many lives we will save or lose per dollar, at the margin, if we change the defense budget and β telling us how many lives we will save or lose per missile if the number of missiles launched is changed. We will find out later that by adjusting the α we in effect adjust the total budget spent on defense and by adjusting the β we in effect adjust the total number of missiles that are fired (though there is some interaction between the two adjustments). So the α and β can be chosen to meet the preassigned D and N that were set in the original problem. We can now isolate any particular local area in which to buy defense, and then we, as engineers and operations researchers, allocate money to various civil defense programs in this area, knowing that every time we present a target to a set of missiles such that the marginal return is greater than β, a missile will be fired at it. This is a problem which can be worked out by local experts or at least by experts concentrating on the local problem. They do not have to know what is happening in the whole country, they just have to know about their own area.

Let us assume they do know how to solve this problem and produce as a solution a sum of money d_i to be spent on the local area A_i and the number of missiles n_i that will be fired at the city if there is an attack; where d_i is the maximum amount that can be spent and still stay within the constraint of no more than α dollars being spent to save a life and n_i is the maximum number of missiles that can be launched at the local area A_i and stay within the constraint of no less the β people killed per marginal missile. As stated this max-min problem can be done for each area separately by the local experts on that area (or by people that are working on only one area at a time, since in the case of a study it might actually be the same group of people that did it for the whole country; but by not having to think about the whole problem as a unit, they can break the problem up into manageable pieces). When this has been done for every area in the country, we can add up all the money that was spent ($\sum d_i$) and all the missiles that were launched ($\sum n_i$) and compare these numbers with the total number of dollars (D) and missiles (N) which were supposed to be available. If, for example, the sum comes out too small we would be willing to spend more money to save a life (increase α), and if the sum came out too large we would decrease α and try again. Similarly for the missiles. If the $\sum n_i$ comes out greater than N, we had to use missiles more carefully (i.e., increase the required number of deaths per missile). If $\sum n_i$ comes out too small we relax our standards and decrease β the number of deaths per missile. The above is a somewhat inaccurate description because it ignores certain details of what can actually happen, but it gives the spirit of the thing.

In order to give a more precise feel for these problems, it is of
some interest to give a slightly more accurate description of how to pro-
ceed. Let us, again, pick an α and a β_1. Let us, however, not bother ad-
justing the β_1 to get the right result, but keep β_1 fixed and adjust α
until we get our fixed budget, D. Then given any specific number of mis-
siles, n, that could have been fired, we can optimize the allocation of
these missiles to the above target system and draw a curve of the resulting
destruction vs. n. It will, of course, have the characteristic shape that
was given in Figure 2. (Though it looks as if one picked out the most
lucrative target first and so on, in drawing this curve we should take
into account for each n that we know beforehand that n missiles are avail-
able though in practice it often--though not always--does not make very
much difference if one does not do this.) We can now pick a β_2 and go
through the same process. We can do this for a number of values of β.
We will then get a family of curves, each of which has a region of con-
stant slope, β_i, and all of which are associated with the same total dollar
defense budget, D, but with a different detailed performance of destruc-
tion vs. number of missiles. Three such curves are shown below to illus-
trate how the family of curves might look (Figure 5a). If we now wished
to get the optimal allocation for a fixed N we would simply look at the
envelope of those curves and enter the abscissa at that N value and pick
the β of the curve that is tangent to the envelope at that point.

NUMBER OF MISSILES FIRED (1 to n)
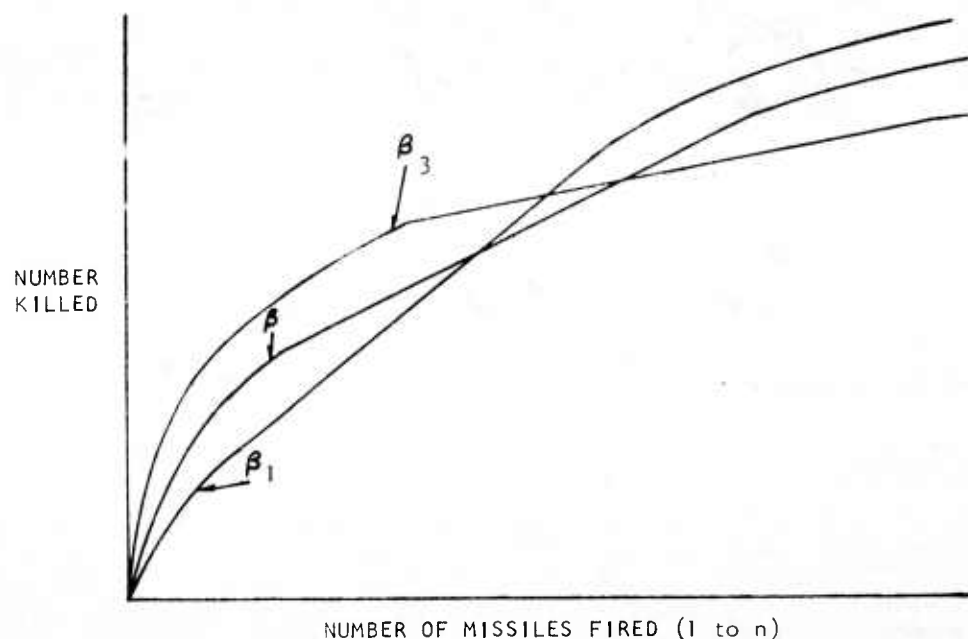
Figure 5a.   Different Defense Allocations with the
Same Total Budget (D) but Different β's

The reader should note that the various solutions (for various D's)
which we got in our first very simplified example, if graphed against N
for fixed D would be the same curve as the envelope we would obtain if we
applied the above algorithm to the same simple problem.

There are more complicated situations; we may have various kinds of
uncertainties, for example. In particular we may not know how effective
each missile will be, or how many missiles are going to be fired, or what
kind, but only a range for these quantities. In that case we might prefer
some other curve of the family to operating with the one that is tangent
to an average N point.

The reader will presumably recognize that one could pursue the use
of α's and β's almost indefinitely. But we would not be justified in
discussing here the most sophisticated aspects of this approach. A some-
what more complete discussion of this technique will be found in the com-
panion report on Civil Defense.

However, it should be plausible that we can do a similar kind of
analysis for the somewhat more complicated situation indicated in Figure
6, when we talk about the more complex offense-defense systems.[2] The dif-
ficulty here is that the active defense (ABM) does not have a simple dim-
inishing-returns curve for either the offense or the defense; both have
S-shapes (as shown in Figures 7 and 8). This means that some entrance-
price phenomena show up.

Very briefly (and somewhat inaccurately) one has to invest a fixed
sum of money before one gets into business; thus we indicate on the curve
a so-called "entrance price" to pay the cost of the fixed installations
such as radars, computers, and construction for the defense missile farms
before one has any missiles to launch at the incoming objects. As far as
the offense is concerned, it has to saturate to some degree the defenses
before it can hope to get any missiles through, so it has to pay a "pene-
tration price for saturation." The convenient way of working with such
S-shaped curves is to substitute for them an artificial curve on which one
draws a straight line tangent to the upper portion of the S-shaped curve
as indicated by the dotted lines on the diagrams. We can now work with
these new curves where we can either have a situation of constant or dim-
inishing returns everywhere and we can apply the same techniques we applied
in the previous simple case for diminishing-return type curves. Then,
looking at the solution of the problem, if we find that everywhere we have
ended up with allocations that are either at zero (that is, spent no money
on the installation or sent no missiles) or past the artificial dotted
straight-line portion of the curve, then in fact the solution we have

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[2] It should be noted that because of the greater complexity of the
Central War system we had to break up the 6.1 level into 6.1.1 and 6.1.2,
and the 6.2 level into 6.2.1 and 6.2.2.

Figure 6. Complex Offense-Defense System

Expected
Death
Toll

Penetration Price
for
Saturation

Number of Missiles Fired
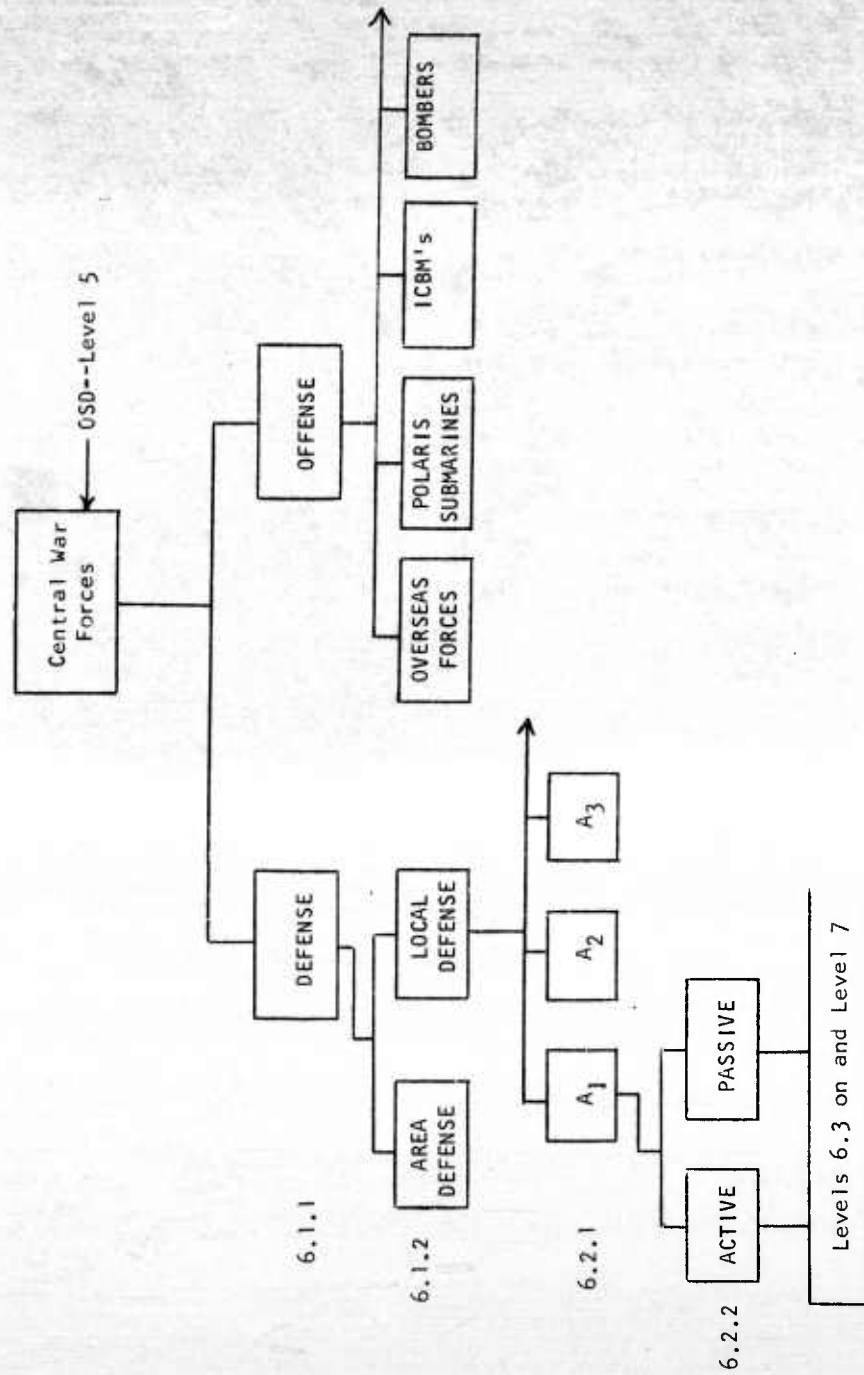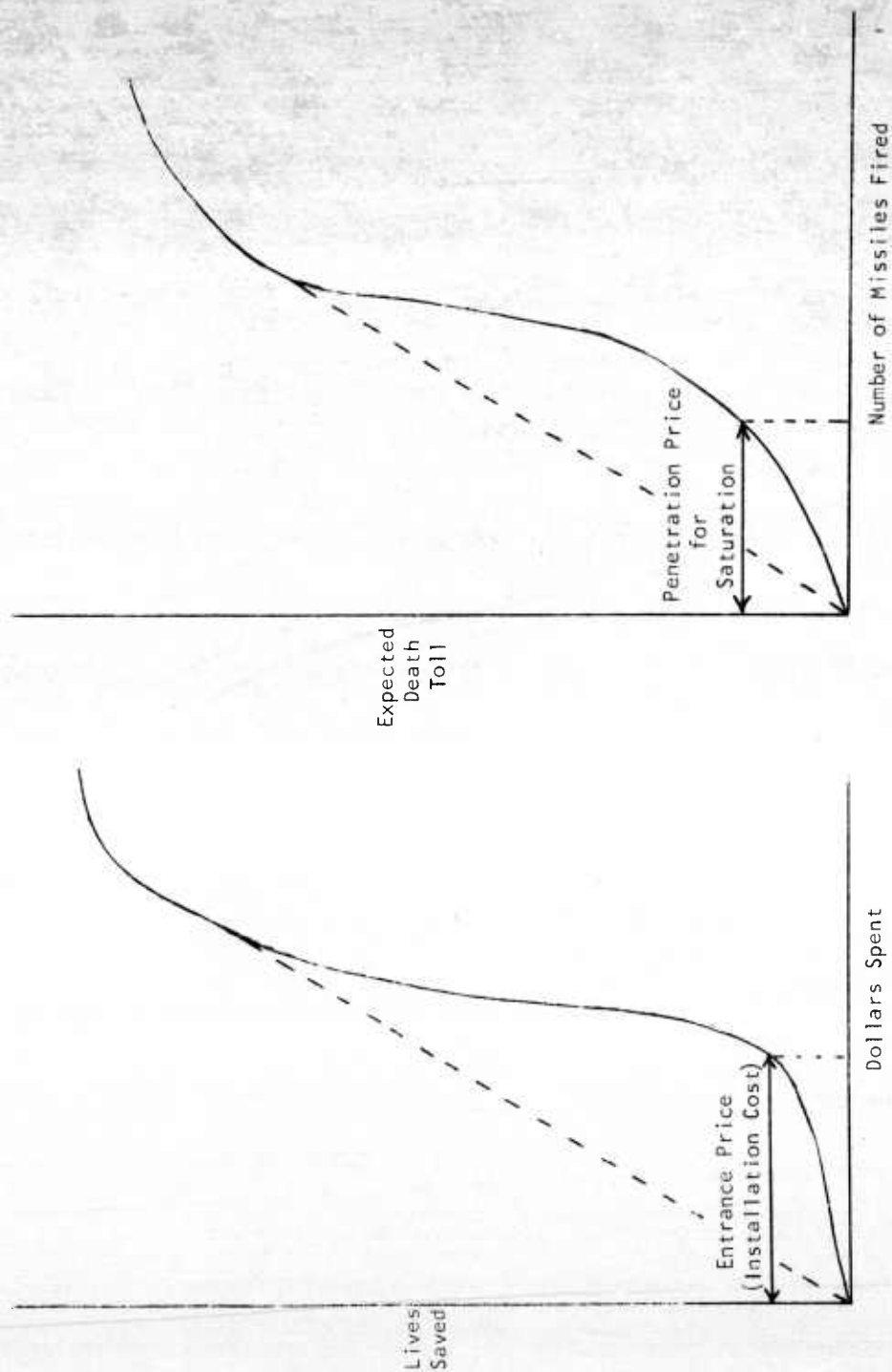
Figure 8. Performance of Missiles Against
Fixed Active (ABM) Defense

Lives
Saved

Entrance Price
(Installation Cost)

Dollars Spent

Figure 7. Cost/Effectiveness of ABM
Defenses Against a Fixed Attack

achieved is the correct solution. In some isolated areas, generally no more than one, we will find ourselves operating on the artificial part of the new curve. In that case we have to adjust the total solution to put the local solution in this area on either zero or past the point of tangency on the new curves.

If in addition to local active defense we have an active area defense, then there will be even further complexities. Again, a fuller discussion will be found in the previously mentioned Civil Defense report.

Treatment of Engineering and Other Uncertainties (The Use of Optimistic-Pessimistic Analyses)

The reader should have gotten the impression at this point of the large uncertainties in, and the complexity of, the environments in which the engineers, operations researchers, weapons systems designers, and other Level Six professionals must work. These environmental uncertainties are often greatly increased, though usually not swamped, by engineering and technical uncertainties. The normal way of handling such uncertainties--by putting in factors of safety--is not by itself usually a satisfactory approach in this kind of work. It is not as if we could get all we want from these systems by just spending a few extra dollars. No matter what we do, the many situations and contingency plans will be far from satisfactory and thus subtlety and sophistication in design may help more than brute force or straightforward textbook techniques in alleviating problems which are to some degree inevitable.

One important design practice that could help in getting efficient use of resources is to carry along at least two simultaneous analyses and the corresponding compromised design--one analysis that would be appropriate to a conservative Soviet or an optimistic U.S. planner and vice versa. This is in some ways the exact opposite of the one-horse-shay approach. Consider, for example, the following hypothetical (and inaccurate) example. Assume that the following uncertainties exist in designing a missile silo to survive a certain attack that would subject the silo to 100 psi (pounds per square inch pressure).

> door ± 10%
> walls ± factor of 2
> ground shock ± factor of 5

If we wish to make sure the silo will survive as a system, we would overdesign the door by 10%, the walls by a factor of 2, and the ground shock absorbing mechanisms by a factor of 5. This would probably make the door the weak point. If now we very inexpensively increased the specifications of the door to raise its performance to 200 psi, then with the overdesigned walls a Soviet planner who took the uncertainties against himself would feel compelled to (and an optimistic U.S. planner willing to) think of the silo as being 200 psi, even though a conservative U.S. planner or an optimistic S.U. planner would continue to assign the value of 100 psi to the structure. (Since the walls might fail at that point--

if the factor of two turned out to be needed.) One would not want to do the same thing with the door and walls vis-à-vis the shock absorbing mechanism because now it is not inexpensive to increase the design criteria of the door by 5 and the walls by 2.5.

We will note later that this principle of carrying along simultaneously both an optimistic and a pessimistic calculation can be of great importance in getting some reasonable orientation in estimating the outcomes of certain situations.[3] Rather startingly, "optimistic-pessimistic" analyses are almost never used in engineering studies at Level Six, though they are sometimes used in analyses at Levels Four and Five.

Characteristics of Civil Defense Programs

As already mentioned, we will give classified examples of the principles and substance of Level Six analyses in some of the accompanying reports. However, we ought to say more here on the various considerations that will come up. We could, for example, consider how to make trades within each local area A_i or how to carry through the above-mentioned "optimistic-pessimistic" analysis (i.e., how are the d_i dollars spent?). But rather than do so here, which would be, to some degree, digressive, we will simply summarize how the system might perform as a whole after the allocation has been made. We will use for our illustrative example the postures described in Chapter II on page 27 and denoted there by U.S.-A, U.S.-B, S.U.-A, S.U.-B1, S.U.-B2, and S.U.-C

Let us start with U.S.-A versus S.U.-A. The U.S.-A program has only been roughly optimized with an "α" of about $50. For the unevacuated case (and attacks of one or two hundred missiles or so) the "β" is about 200,000. The table on the next page indicates how fatalities might go versus varying numbers of "ordinary" ICBM's of S.U.-A actually delivered to their target. One would conjecture that the first such ICBM might kill about 5 million Americans. The next one would not find anywhere near as lucrative a target and might kill about 3 million. The fifth might kill about 2, the tenth about 1.5 and so on. One could make up a rough table of the number of missiles versus total casualties, as given on the next page.

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[3]The principle is of special importance when one is estimating the outcome of a chain of events. If at 10 branching points we systematically choose a pessimistic outcome that could occur only half the time, then we get an over-all probability for that particular chain of events of $(\frac{1}{2})^{10}$ or 1/1000.

Because the above is often done almost unconsciously, it is well to balance the calculation by one in which we pick the optimistic result each time. This too has only 1 chance in 1000 of occurring, but now one at least has some idea of the range between the optimistic and pessimistic. It is all too typical in analyses to choose blindly the one or the other in order to make some desired point.

Number of Missiles	Unevacuated Case (Fallout Protection Available)		One (Extreme) Evacuation Case (Fallout Protection Unavailable)	
	Millions Killed by Nth Missile ("β")	Total Fatalities	Millions Killed by Nth Missile ("β")	Total Fatalities
1	5	5	.5	.5
2	3	8	.3	.8
5	2.0	14	.2	1.5
10	1.5	22	.2	2.5
20	1.00	33	.2	4.5
50	.5	53	.2	10.5
100	.25	70	.2	20.5
200	.15	90	.15	38.0
300	.10	100	.15	53.0
500	.05	105	.10	63.0

It should be clear why we characterize U.S.-A as being an MFD policy. Even if the Soviets have only a very small number of missiles surviving, they can always kill tens of millions of Americans. However, to the extent that a program of evacuation plus improvised protection could be carried out, the β of 200,000 would not be reduced; indeed it would come into play much sooner (at 5 bombs). If the evacuation is perfect, then the effective β starts out at about 200,000 and gradually decreases to 100,000.

Consider now the civil defense[4] program very briefly described under (U.S.-8) on page 27. That posture had 120 million urban blast shelters (mostly 10 to 300 psi), 150 million nonurban shelters (mostly 5 to 10 psi), the necessary shelter survival and support systems, and a base for improvised protection and recuperation. We will consider how this system might perform under attack by 500 "ordinary" missiles or so. In a counterpopulation attack, this number of missiles might kill 100-150 million Americans if they landed simultaneously and without warning. (The reason why there is 45 million more dead than in the table above, is that the fallout shelter is assumed to give a very low level of blast protection-- basically against flying debris or being oneself made into flying debris by the blast wind.)

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[4]For a 500-missile attack this program has a β of about 20,000 lives per missile in scenarios with a week's warning, and a β of about 100,000 if there is only 3 hours warning. The α was about $500 per person. This gave a total budget of about 20 billion for the shelters.

However, the usual way to think of a blast-shelter civil defense sys-
tem is to think of people rushing for shelters in something like 15 minutes.
Let us assume that the shelters were built with this tactic in mind and the
population succeeds in getting and exploiting 15-minute warning. Their
vulnerability, under the assumed attack, might then go down from, say,
100-150 million to, say, 50-60 million people killed (if the 500 missiles
were directed against cities) and this vulnerability would not change
much if there were more time available. This is indicated by curve 1 on
the next chart.

One could build the system somewhat differently (and more inexpen-
sively) with roughly the capabilities of U.S.-B but designed to take ad-
vantage of more movement. The performance of this system (in a very hy-
pothetical and not necessarily reliable way) is indicated by curves 2 and
3 on the same chart. It is assumed on that chart that some period of time
has elapsed since the take-shelter order--something between six minutes
and one month--and some tactic has been followed by the civil defense
authorities. The vulnerability of people will then be somewhere between
curves 2 and 3. Conceptually, curve 2 assumes that the civil defense
authorities knew what the danger was--say that the attack was going to
occur in two hours--and then gave the right orders. This curve then es-
timates the casualties if the tactical movement went well and the attack
did in fact occur in two hours. Similarly, for any other estimated time
for the bomb drop, one could then probably get a performance curve much
like 2 on the chart if the estimated time turned out to be right--thus
curve 2 would give the optimum performance of the system.

Performance curve 3 assumes that we think we have a week, and we make
all of our moves on that assumption but hedge to some degree against the
attack coming earlier. Then our vulnerability would go as indicated by
curve 3. (Curve 3 assumes, after the first six hours, that there is an
additional last-minute warning of five minutes.) In actual practice we
would presumably be between curves 2 and 3. Assume for the moment that
people have in fact been distributed and dispersed to some degree in very
adequate shelters so that the most they could suffer under the hypotheti-
cal attack is about ten million fatalities as indicated by the one-week
point for either curves 2 or 3.

It would, of course, be difficult to hold that posture indefinitely.
Two things might happen. We might still be extremely frightened and con-
tinue to lessen civilian vulnerability so that it would go down as indi-
cated by curve 3a (about 6,000,000 fatalities after 5 minutes warning),
or we might relax to some degree and the vulnerability would increase
more or less along curve 3b, staying roughly constant after a month (at
about 20 million fatalities if there is 5-minute warning). In both cases,
of course, it is assumed that the tense situation is continuing.

Curve 4 assumes a situation in which there has been some kind of
formal or informal abatement of the crisis; many people, but not all,
have more or less returned home (but there is some tendency even for these
returnees to relocate near shelters or exit roads). However, just because

U.S. POSTURE II (EARLY OR MID-SEVENTIES)

IMMEDIATE HOSTAGES (FATALITIES) TO A 500 MISSILE COUNTER-POPULATION ATTACK)
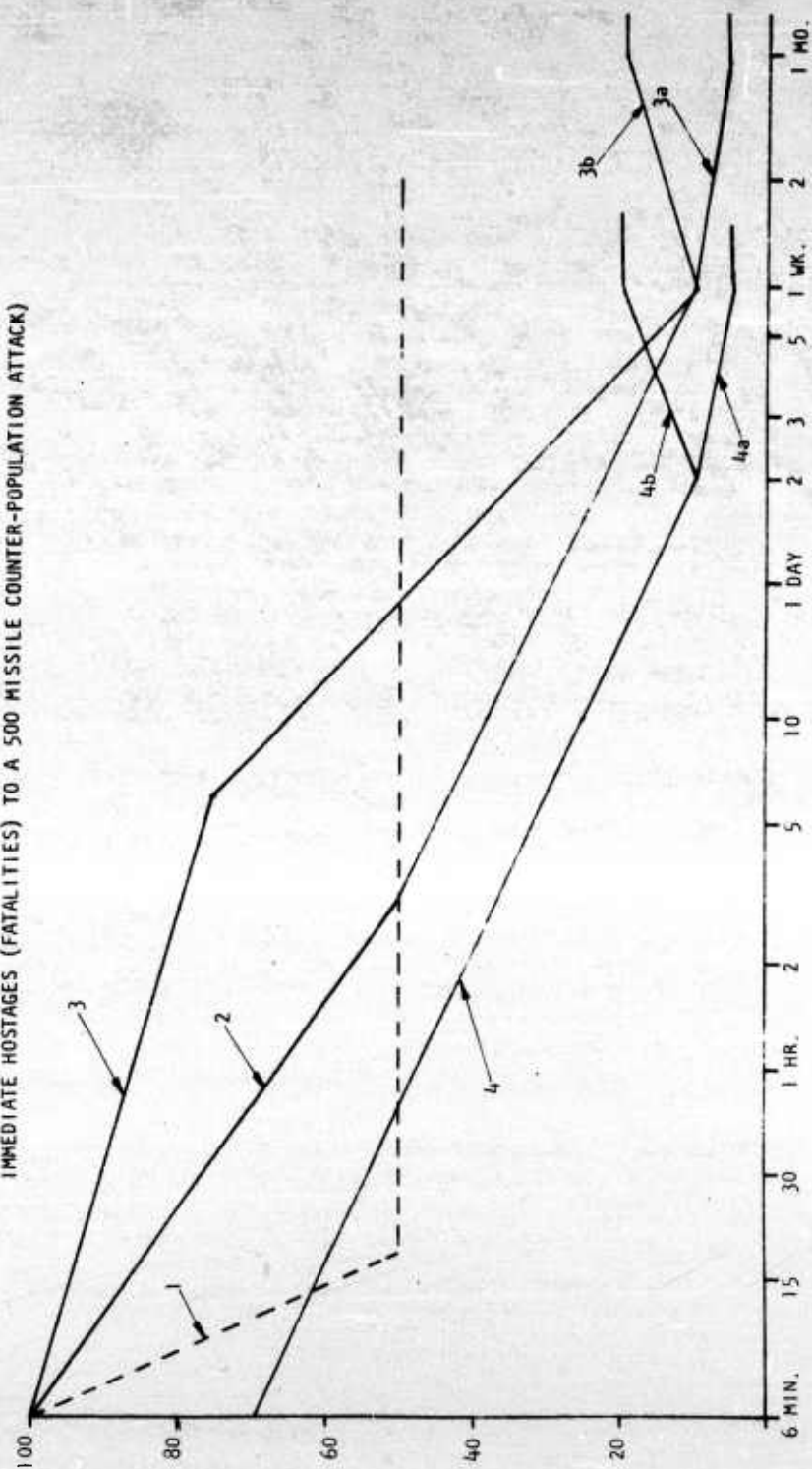
we have gone through the exercise once, efficiency has increased enormously
and also there will be less to do because many people will stay near their
protection. Therefore, if a crisis comes again there will probably be a
much improved performance of the system as indicated by curve 4. It now
takes only two days to get to a point of near-maximum protection and then
one can either improve or deteriorate, i.e., go along either 4a or 4b.

Up to this point we have been deliberately vague about the actual
effects of the weapons we are using. It probably makes sense to digress
very briefly into this question. Actually, of course, the aftereffects
of war are very, very complicated and in trying to calculate the perfor-
mance of these systems and in trying to improve their performance by
various defense measures the Level Six analysts must look at a very large
range of phenomena as indicated below.

1.	Blast and prompt radiation	6.	Environmental problems
2.	Thermal radiation and fire	7.	Rate of recuperation
3.	Acute effects of fallout	8.	Social changes
4.	Postwar survival	9.	Medical aftereffects
5.	Reorganization	10.	Genetic effects

Each of the 10 areas indicated above requires its own professional
expertise and many important studies remain to be done. In particular,
we know relatively little about 5-8, and while we think we know enough
about 1-4, 9, and 10 to enable us to go ahead with our programs, one
would like to know a good deal more. We will not make many comments on
the specific issues raised by the above list. We hope, in a report we
are doing for OEP and OCD which should be available sometime in mid-'64,
to have a pretty current summary of the state of knowledge in each of
the above areas. We would like here simply to indicate some of the major
issues that will be raised when the above data are reintegrated to pro-
vide a total picture of what could happen to a country as a result of a
war.

Societal Recovery Effects

First and foremost, of course, we look at the total mortality--how
many people have been killed? This is partly because people are values
in themselves and partly because the character of the postwar nation will
be determined, to some degree, by what the surviving population is. From
this second point of view one can presumably take quite large casualties
ranged higher than 50%, and the social fabric persisted, after a while,
mostly unchanged but going through the several stages indicated below:

    a. Previous society and culture
    b. Disaster
    c. Postdisaster disorganization
    d. Period of muddling through
    e. Period of successful innovation
    f. Re-establishment, to some extent, of previous
        society and culture

However, the previous disasters are not completely analogous to our current problems. For one thing, our society is more complex, which makes it more difficult to survive if conditions are reduced to a very primitive level. If one tried to draw, in some abstract, metaphorical sense, curves giving the number of deaths or the cultural loss as a result of an attack he might be tempted to draw the curves of Figure 9 below.

Figure 9

METAPHORICAL DESCRIPTION OF
TWO KINDS OF LOSSES

Megatonnage (Mixed Attack)
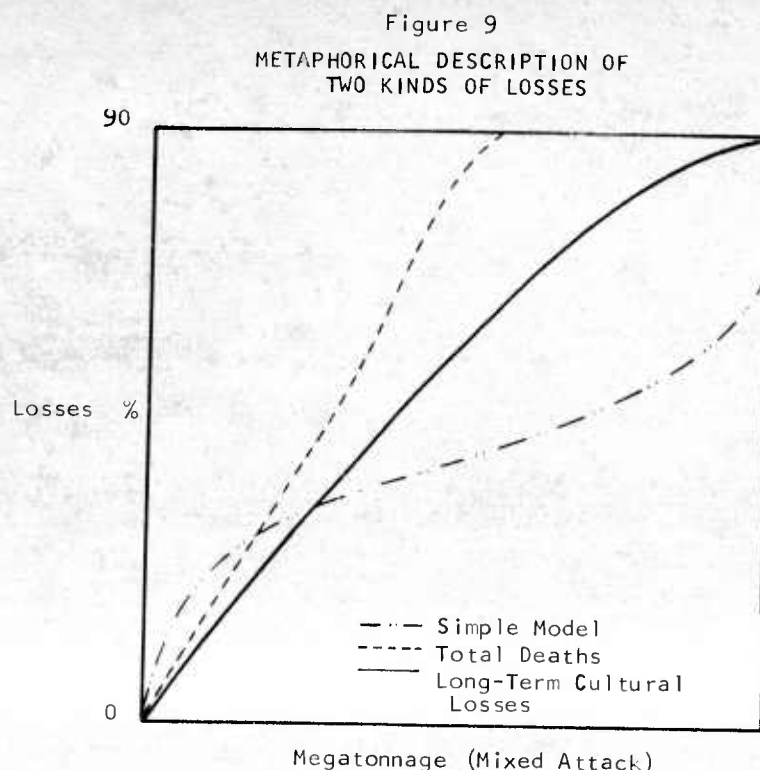
In the above diagram we have assumed that the actual number of deaths (including some allowance for reduced life expectancy) is greater than the calculated number because of postattack and postwar effects. We have also indicated that at first cultural losses rise more rapidly than the number of deaths, but that even if the society is annihilated much of its culture may continue. Even though a modestly destructive war might jeopardize many of a nation's values, an ultra-destructive war which caused 100% fatalities would not necessarily annihilate all cultural values-- at least in terms of what the nation stood for in the world. Greek and Roman civilization has long since passed on, but Greek and Roman ways, customs, and values still survive and in some ways dominate Western culture.

Similarly, the disutility of any attack can be indicated metaphori-
cally by the curve of Figure 10 below. Or at least one tends to draw
something like this figure in which one has a series of sharply rising
portions followed by relatively plateau-like portions. In each of the
sharply rising portions a new effect is brought in. We start with the
idea that any kind of a war is a disutility even if a very small number
of people are killed. After, in some sense, we have reached a threshold
level of casualties, there is some kind of law of diminishing returns
(i.e., we do not feel as badly about an additional one million people be-
ing killed if ten million people have already been killed, as we did about
the first one million. This sounds harsh, but one judges the proposition
is valid in terms of both psychological facts and of impact on society.)
After a while, however, we begin to jeopardize the current standard of
living. This introduces some new considerations and causes a sharp rise
in disutility. The next rise occurs when we begin to jeopardize our actual
way of life, that is, the effects of the war are such as to jeopardize
the likelihood of some important aspect of short-run recuperation, either
economic, political, or social. Finally we reach another sharp rise where
eventual or long-term recuperation (in the sense of restoration of a large
GNP in a decade or two) becomes questionable and finally there is the point
where our national existence is being jeopardized. That is, if we pass
this point in the magnitude of attack then the United States may not exist
in the future in any meaningful sense

Figure 10

METAPHORICAL DESCRIPTION OF
DISUTILITY VS. ATTACK

"Size" of Attack
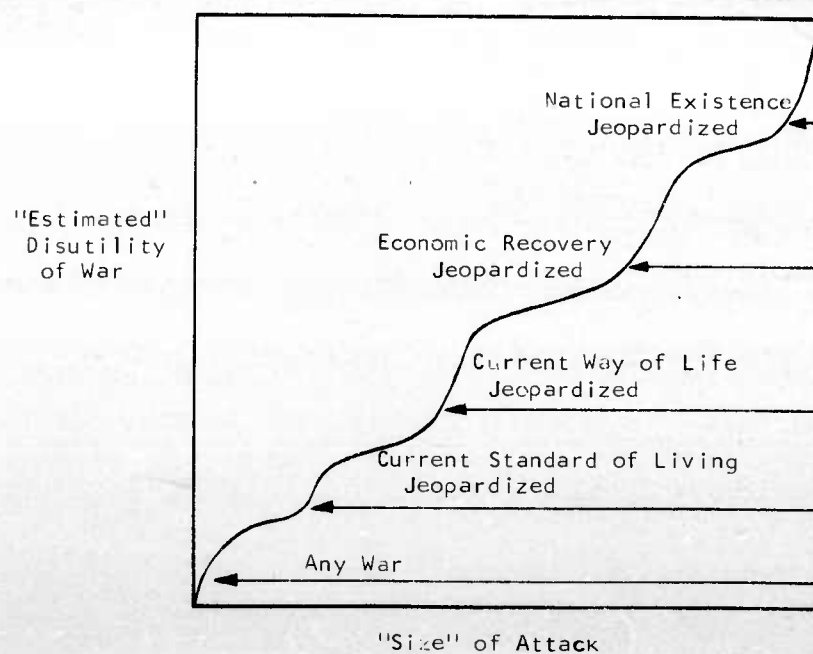
If one assumes that the above (admittedly metaphoric) description of
the disutility of various attacks is reasonably valid, one notes that our
attitudes toward defense and Improved War Outcome (discussed in the next
chapter) do not reflect the above disutility curve. That is, while every-
body is concerned with limiting the first sharp increase, the difference
between war and no war, relatively few people are deeply interested in
limiting the later increases. Even after deterrence has failed, the major
or sole interest is in 90% or greater defense. If we cannot do this we
tend to feel hopeless.[5] One assumes that the reason for this is probably
less because the metaphorical curve is misleading but because the later
disutilities are hypothetical in nature and difficult to take seriously.
However, presumably some proponents of DI type strategies are willing to
argue that it might be just as valuable if war occurs to move from any
one of the plateaus to any plateau beneath it. And since we do not in
fact know where these plateaus are we might as well make the disutility
curve a smooth line without sharp rises and flat plateaus, but one that
is reasonably close to a "forty-five degree line." This could mean that
changing an attack from, say, being effectively 500 missiles by defense
measures to 300 missiles might be as valuable (or more valuable) as chang-
ing it from, say, 100 missiles to 50 missiles or 50 missiles to 10 missiles.
If one believes this, then under a very large range of circumstances there
is a feasible role for DI strategies and other attempts at Improved War
Outcome (as discussed in the next chapter).

Some Qualitative Level Four and Five Considerations That Should Affect Civil Defense Programs

We discuss in the civil defense report the possibilities for design-
ing programs with the performance characteristics of curves 2-4 (page 187)
instead of curve 1 and some of the uncertainties which surround the calcu-
lation of such performance. We would only like to note here the importance
and desirability both of designing the components of the system to such
requirements as we illustrated by curves 2, 3, and 4, and of testing of
any existing or planned system against such criteria.

In particular, in considering the kinds of strains and requirements
to which the various components of either side's military establishment
may be subjected, it is important to realize that those parts which are
supposed to defend civilians, particularly civil defense systems, do not
necessarily need to have as quick reaction as is normally imagined. We
have already pointed out (pages 1,2 and 142-8) that in the scenarios we think
of as most important (e.g. Beta-3 and Gamma-1 scenarios) there is likely to
be a good deal of warning either before or after the attack. First, there
is likely to be an extreme degree of tension. Then, in the case in which
we go first, we have warning because we know when we press the button and

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[5]I.e., compare the following two cliches which invariably follow each
other: 1) "In the nuclear-ballistic missile age, defense is hopeless."
and 2) "Some bombs will always get through." The second statement does
not imply the first.

there is going to be at least one-half hour to an hour before even the
earliest Soviet missiles would reach the United States. In many circum-
stances, most or all of these earliest missiles will be used against coun-
terforce targets (i.e., if the U.S. tried to fight the war according to a
controlled response doctrine and the Soviet Union reciprocated).

Similarly, if the Soviet Union struck first, it is not likely that
its first wave will be mainly directed at U.S. civilians (as we pointed
out in the discussion of Beta-1, -2, and -3 scenarios on pages 140 to
144). Yet the fact that under current United States controlled response
doctrine an enormous incentive is given to the Soviets, if they attack the
United States, to avoid attacking our cities on their first wave (whether
this wave is the first or second strike of the war) tends to be ignored
in most thinking and planning about defense. We also pointed out our con-
jecture that even if the Soviets believed that they could take out much or
all of our strategic forces on a first strike, they could not be certain
of it. Therefore, it would make sense for them to plan on using United
States cities as hostages which could be used to protect their own cities
from being struck by our retaliatory blow, if their first wave goes astray
in any way. In almost any case, if the war ends in negotiation, their
avoidance of U.S. cities will have paid off. If, on the other hand, they
hit U.S. cities early in the attack we are likely to "spasm" in reply.
Then, unless their strike has been extraordinarily successful, they are
likely to disappear as a nation, or at least to be set back 25 to 100
years. This means that they lose little by sparing cities on their first
wave and that they may gain a great deal.

It is, of course, well known that the above does not fit in with cur-
rent (or at least announced) Soviet doctrine. The Soviets seem to say
that one of the best ways to win a war is to attack the enemy society. It
is difficult to believe that this would be true in a short war, and it is
difficult to believe that any nation--including the S.U.--would go to war
unless it thought the war would be short (and to some degree victorious).
Long wars are likely to be too uncertain in their outcome for anyone to
start one, unless the initiator is desperate. Therefore, in some sense,
no matter what their current doctrine, the above picture is likely before
(and if) the Soviets launch a first strike.

There is another possible reason for the announced Soviet doctrine.
With the present strategic imbalance they must publicly claim to hold to
an irrational strategy because of its deterrence value. However, every-
thing we said about Soviet character in the previous chapter indicates
that it will be easier for them to learn restraint than for us, and we
seem to have learned it. To summarize, in designing and setting criteria
for civil defense programs we should typically think of each side's pos-
ture as being subjected to maximum strain on the second or later waves of
the attack rather than on the first wave. Therefore, each side should be
willing to trade time and movement for better defense--to think in terms
of Beta-3 and Gamma-1 scenarios rather than in terms of Alpha-1 or Beta-1
scenarios.

However, it is also important to note that even if population is not the target of the first wave, it may be the target of the second or later waves. In any case, population is always being threatened. In other words, the vulnerability of the civilian hostages may affect not only how many people get killed, but the kind of peace treaty the Soviets can force on us, or we can force on the Soviets. For this reason, it may make a good deal of sense to try to protect people from being threatened by second- and later-wave attacks, even though we have not protected them adequately on the first wave. However, we note that it is easier to protect population from second- and later-wave attacks than from first-wave strikes out of the blue. (All of the large, vulnerable ICBM's and many of the protected ones will either be destroyed or already launched at some military target. Others will have to be withheld for bargaining and intrawar deterrence purposes.) This last point, that weak or inadequate defense against later-wave attacks may lead to the acceptance of a poor peace treaty, is not an overwhelming argument against MFD type protection, at least in comparison with no protection at all. If the U.S. or S.U. population is not adequately protected against second- and later-wave attacks aimed at them, so that in order to protect them either of these nations may have to make some undeniable concessions on the peace treaty, then the nation will have lost something politically, but not as much as if it had lost the bulk of its urban population. However, such potential losses in bargaining capability may be an argument for moving from an MFD to a DI or NCF policy.

In any case, Controlled Response is today official doctrine for the United States (taken more or less seriously in various quarters, but--as is explained later--one rather expects that it will be taken more seriously as time goes on). Therefore, it seems to us that the minimum the United States could do is put in a civil defense program which is compatible with this doctrine (even under an MFD strategy). Such a minimum program might be fallout protection for everyone and blast and thermal protection for about 10,000,000 people or so who live within, say, 10 miles of likely counterforce targets. Such a program might cost about $5-10 billion (over 5 years) and would get us into the business of civil defense in a very impressive way. It would be more than a first step. In a very large range of wars (both counterforce and countervalue) it could save the lives of 30-50 million people and it makes a controlled response more likely. In particular, it clearly announces to the Soviets (and our own people and allies) that we take controlled response seriously. This should be very educational and improve discussion and understanding of these issues generally--a rather important by-product. However, it does not commit us to go into larger programs such as would be appropriate for a DI or NCF strategy.

In conclusion, one seemingly new thing we have to say is that a careful reading of current Controlled Response doctrine indicates: (1) That "no cities" means that the people around SAC bases are really not adequately protected by deterrence and therefore are entitled to blast and thermal--in addition to fallout--protection. (One might argue that the city of Tucson deserves an independent nuclear deterrent--or at least shelters--since under the Controlled Response doctrine it is not protected by the same deterrent threat that protects New York.) (2) That there should be at least fallout protection for all who might be collateral targets of fallout caused by a counterforce attack (i.e., just about everybody).

We also tried to elaborate the distinction between being threatened on the first wave and later waves of the attack because we have found widespread misunderstanding of this point. This goes two ways; people are not really familiar with the strong arguments as to why the Soviets might avoid United States cities on their first wave, and others seem to be unfamiliar with why it is important to be able to protect United States cities from later-wave attacks. We also tried to point out that protecting cities from later-wave attacks is likely to be a much easier job than protecting from earlier waves, and that not protecting people adequately could decrease U.S. capability to resist post-attack blackmail and thus reduce both our deterrence to deliberate S.U. attack and our ability to achieve a "satisfactory" political and military result if deterrence fails.

It should also be clear that in a crisis the dynamics over time and the way in which one uses this time are the essence of the problem, and that it is necessary to describe performance of systems and set of criteria as in the second set of curves and not the first. This is one of the reasons why we will concentrate in Chapter XI on crisis and escalation type programs and why, in previous chapters, we emphasized as much as we did the need for thinking of central war as part of an escalation process rather than as something which is likely to come out of the blue. Actually it is very rare to find anybody thinking of details of the tactics that might be used in a war, either from the viewpoint of protecting civilians or even of how one uses the more strictly military forces. We will spend the rest of this chapter on this question; this digression into Level Four and Five considerations should provide additional background for this tactical discussion.

Tactics

We start by noting that even with our digression into Level Four and Five it is still impossible to discuss some of the implications or even feasibility of many tactics unless one understands the strategic objectives and the details of the accompanying bargaining. Nevertheless we will defer further discussions of these objectives and bargaining to Chapters IX to XI, but some of the flavor of the possibilities should have been obtained from the Introductory Comments to Part II, when we discussed bargaining in the P-Q model. However, to the extent that the P-Q model discussion did not give sufficient background we would like to emphasize again that there is a large range of objectives over which a war can be fought, a very large range of threats with which we must plan to cope, and that while many of the tactics that we will discuss will not look realistic or relevant to the typical situations that are normally considered, all of them seem to us to be of value or relevance to a prudent planner. Thus we can only ask the reader to suspend judgment until he has read Chapters IX to XI. In particular, we cannot make any real estimates of whether or not the Soviets would adopt similar tactics under various circumstances or pressures unless we first understand what the tactics are and what their benefits and disadvantages might be. It should be noted that this is so even if we or the Soviets should not try to think of these problems ahead of time. In any escalation situation they and we are both much more likely to think hard about these possibilities-- about the objectives, risks, and alternatives, and vice versa. So the Soviets could learn, during the crisis, what they are willing and not willing to do. And similarly for us. Even if we do not consider "sophisticated" tactics, the Soviets might, and then try them on us--after using a crisis complete with ultimatums and messages to educate us.

Need to Consider Tactics More Seriously

One of the main points to be made in the next three chapters is the need for limiting objectives in a central war--and the consequent necessity for initiating negotiations before, during, and after an attack; as a result there is a very close relationship between the detailed tactics of central war and the over-all objectives or strategy. This relationship is, of course, not completely unprecedented, but it was uncommon to have as intimate an interdependence between them as is characteristic of the central-war situation today. Unfortunately, there is also today not only a tendency to treat the tactics of central war as a relatively narrow professional concern; there is even a certain disinterest in the whole topic. We have already mentioned, in the first chapter, one of the main reasons for this disinterest--psychological blocks. There are even larger blocks against thinking seriously about details and techniques of Level Six tactics than of Level Four and Five tactics or strategy, as we are using the term in this report (to include Purposes, Requirements, and Criteria for U.S. Central War Forces and Political-Military Objectives).

Strategy does have an important, apparent and "felt" relation to other prewar objectives, such as the problems of deterrence and foreign policy, and therefore there is, of necessity, much thinking about this level. There is even an interest in capabilities because, after all, these have to be procured and maintained in peacetime. Since decisions must be made whose consequences will be seen and felt, decision-makers and their staffs must be concerned. But the detailed requirements for the wartime use of capabilities to further strategies, as reflected in the tactics to be chosen if war occurs, are not forcibly brought to anybody's attention. Decisions, which are made passively, either by default or inattention, are neither felt nor are their consequences easily understood or very visible. Indeed, these decisions are highly classified. This decreases further the felt need to discuss them since, by and large, one does not know what they are.

In addition, since nuclear tactics are to be implemented only if deterrence fails, the attitude of mind illustrated by the phrase "nuclear incredulity" (an attitude which almost everybody has as long as we stay below rung 10 on the (U.S.) Escalation Ladder) makes it difficult to take seriously the possibility that it is important to think through to the bitter end at least some of the possibilities that arise if deterrence fails. Thus there are many conscientious, responsible, intelligent individuals, who would not stand for obvious (conceptual or actual) lack of understanding of any topic in an area in which they are working or have responsibilities, who are disturbed or annoyed when anyone attempts to discuss central war tactics in a sophisticated or complex way. It just does not seem worth while to master the various distinctions and cases, even when it is clear that these distinctions and cases are relevant to an understanding of the alternatives. This disinterest in tactics can be unfortunate since many major strategic issues are almost impossible to discuss seriously without analyzing tactics in a somewhat more detailed fashion than is customary (even though the discussion might still be relatively superficial).

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We will start our discussion of tactics by considering the various kinds of attacks that can be launched by an attacker on his first strike.

Various Attacks

One of the most important ways of characterizing an attack is to consider the target system and the purpose for which this target system was chosen. We shall divide all attacks into four broad categories according to their basic motivation as follows: (1) Strategic Military (Counterforce) Attacks, (2) Civilian (Countervalue) Devastation Attacks, (3) Symbolic Attacks, and (4) Special Instrumental Attacks. As always, the divisions are not sharp; there is some overlap between them. While this overlap will rarely cause confusion, some particular difficulties will be discussed.

The first category (Counterforce) more or less corresponds to the current (McNamara) philosophy of using our strategic forces to disarm the enemy. The second category (Countervalue) has as its objective to harm, destroy or annihilate the enemy's people, society, economy, or some critical component thereof. Attacks in the third category (Symbolic) may be against military or civilian targets but are usually many times less violent than either the counterforce or countervalue attacks. Their major purpose lies in their symbolic meaning or the (implicit or explicit) message or lesson they communicate. They are used for warning, bargaining, punishment, or deterrence. Therefore, their degree of success or failure is measured by the psychological and social reaction rather than the objective physical results of the attack. They are being explicitly considered in this report because, as Soviet forces become less vulnerable, these options are likely to play a bigger role in policy formulation than in the past. (One of the startling things about current planning in the Department of Defense is how little explicit consideration has been given to the use of nuclear and unconventional weapons in symbolic attacks. It is to be expected that this situation will soon change.)

Finally, we must consider Special Instrumental Attacks--attacks designed to fulfill special purposes not included in the first three categories. As always, we do not consider the entire range of possible attacks, but have restricted ourselves to the range which is likely to be relevant to policy formulation and decision-making in the next decade or two.

Let us now consider each of these broad categories of attacks and their various important subcategories in turn. For convenience, we give below a detailed outline of the subjects which will be considered.

We shall start our discussion by considering the various kinds of Strategic Military (Counterforce) Attacks.

THE BASIC RELEVANT ATTACKS

I. Strategic Military (Counterforce) Attacks

    A. Disarming Attacks

        1. Unmodified Disarming Attack
        2. Disarming-Attack-With-Avoidance
        3. Constrained Disarming Attack
        4. Augmented Disarming Attack
        5. Environmental Counterforce Attack

    B. Force Reduction (Partially Disarming) Attack

        1. Unmodified Force Reduction Attack
        2. Constrained Force Reduction Attack
        3. Attacks on Leverage Targets

II. Civilian (Countervalue) Devastation Attacks

    A. Retaliation (Revenge, Punishment or Committal)

    B. Instrumental Devastation Attacks

        1. Annihilation of Enemy
        2. Differential Rate of Recovery
        3. Differential Recovery

    C. Environmental Countervalue Attacks

    D. Anti-Recuperation Attacks

III. Symbolic Attacks (Warning, Bargaining, Punitive, Fining, Deterrence)

    A. Show of Force

    B. Demonstration of Force

    C. Demonstration Attack

    D. Exemplary Attack

    E. Reprisal Attack

IV. Special Instrumental Attacks

    A. Problem Solving

    B. Blackmail Enhancing

    C. Regime Subversion

    D. Covert or Anonymous

Disarming Attacks

A disarming attack is designed to bring about a <u>decisive</u> change in
the balance of forces by destroying or damaging the great bulk of the
defender's forces. The most important criterion by which one would tend
to measure whether the change in the defender's force is <u>decisive</u> would
be the answer to the following question. "Given that the attacker knew
before he committed himself to launching an attack, that the defender
would launch an all-out retaliation with the surviving force against the
attacker's civilians, would the attacker still be more willing to accept
the resulting damage than any of the other alternatives he had available
before he made his committal?" This criterion of what is <u>decisive</u> is
theoretically a rather relevant one, but it is too complicated to use
in practice. (It is also not quite perfect since it does not take account
of the possibility that the attacker might be relying, to some degree,
on postattack coercion to intimidate retaliation, as well as on the degree
of disarming he was able to achieve.)

We will call an attack disarming if it possesses the following
characteristic:

It must destroy or put out of commission the great bulk
of the defender's striking power, leaving a residue that is
unable to do massive damage to the attacker even if launched
in retaliation.

What constitutes "massive damage" can be difficult to
decide. The cut-off point might, in extreme circumstances,
coincide, with the impairment of reasonable recovery. How
near one is prepared to get to that point would depend on
the provocation received and on the alternatives available,
so the concept of "disarming" is to some extent a Level Four
(political-military) concept.

"Disarming," like the word "disarmament," is ambiguous about whether
it refers to a direction or an end point. That is, "disarmament" is
sometimes used to mean "arms reduction," and sometimes used to mean "arms
elimination." Our definition of "disarming" has some of the same ambi-
guity, though its connotation will usually suggest the latter sense--
that is, an essentially complete action. Of course, as discussed above,
complete here does not mean down to zero, but down to some vaguely
specified maximum.

"Disarming" has the following relationship to the NCF, CPW, and CFS
strategies. If a strike is sufficiently disarming, then for any partic-
ular provocation one needs less resolve in the NCF and CFS strategies in
order to get sufficient credibility to fulfill the strategic objectives.
In the CPW case, the more disarming the potential strike, the more con-
tingencies and provocations that are covered by the strategy. Thus one
can specify an attack and separately discuss its credibility or desira-
bility as an alternative to some other action. These are important issues

both because a capability to disarm may not make credible the threat of
a cautious possessor while an incapability to disarm may not make com-
pletely incredible the threat of a reckless or emotional possessor.
When we wish to imply that the NCF or CFS strategies have met their ob-
jectives we will speak of a not-incredible or a credible disarming threat.
This phrase would imply not only that the possessor had made a cor-
rect calculation of his capability but that he likely also had the reso-
lution to carry through the threat. Thus we use the term credible first
strike to imply that a threat to strike is credible independently of
whether it gets its credibility from a calculation or from resolve or
committal, though in the CPW strategy the credibility comes purely from
calculation, in PMR and NMR purely or mostly from committal and in NCF
and CFS from a mixture of the two.

A. An Unmodified disarming attack is a disarming attack in which
the plans have not been affected by a concern for either enhancing or
reducing collateral civilian damage.

B. Disarming-Attack-with-Avoidance is a disarming attack which has
been slightly modified to reduce collateral civilian damage. If one
starts with an attack designed to optimize military effectiveness with
no regard for the number of civilian casualties, then for any given
sacrifice of military effectiveness caused by an effort to avoid civilian
casualties there will be a maximum possible reduction of civilian casu-
alties. There is obviously a spectrum of possible attacks any point of
which can be identified either by the degree of sacrifice of military
effectiveness, or by the reduction in the number of civilian casualties.

A disarming-attack-with-avoidance is an attack which is dominated
by military considerations and in which, therefore, the reduction in
civilian casualties is determined by what can be accomplished with the
sacrifice of only a moderate degree of military effectiveness; that is,
a disarming-attack-with-avoidance is one in which civilian damage has
been reduced to the maximum extent possible if no more than a moderate
sacrifice of military effectiveness is accepted.

C. Constrained Disarming Attack is a disarming attack dominated by
consideration of the collateral civilian damage. Military effectiveness
is sacrificed to whatever degree is necessary in order to hold civilian
damage to a specified limit or constraint. The term implies that this
limit is relatively low, e.g., perhaps one to five million casualties.
Of course, if the victim of the attack has his forces so located in
relation to his civilian population that it is impossible to disarm him
without causing a larger number of civilian casualties than is specified
by the constraint, then such a constrained disarming attack would not be
possible. (That is, if the attack were effective enough to disarm the
enemy it would cause too much damage to be within the constraint, and
if it were compromised enough to satisfy the constraint it would not be
effective enough to disarm the enemy.)

D. An Augmented Disarming Attack is a disarming attack in which
there is a moderate deviation from a militarily optimal attack for the
purpose of increasing collateral damage to civilians. It can include
attacks in which a small proportion of weapons are aimed at primarily
civilian targets.

E. Environmental Counterforce uses the fact that megaton weapons
are comparable to gross forces of nature such as earthquakes and hurri-
canes and, paradoxically, the effects of the use of such weapons, beyond
being extremely violent and widespread, can also be very subtle and hard
to predict. The effects of nuclear weapons include blast, thermal and
electromagnetic radiation, ground shock, debris, dust, and ionization--
any one of which may affect people and equipment. Indeed, the effects
of multimegaton weapons are so powerful and complex that even if they do
not destroy a system by blast, they may damage it by more subtle effects
or change the environment in such fashion that the system will be tempo-
rarily or permanently inoperable.

For the first time in the history of war we face what might be
called the problem of the postattack environment--the real danger that
both the short- and long-range environment in which we operate our weapons
systems and conduct our recuperation will be adversely affected both in
expected and unexpected ways.

Following is an example of how an effect which has not been pre-
dicted and thus not adequately prepared for could cause an unexpected
operational failure. A black-out of high-frequency communications
occurred once during the testing of some high-altitude weapons over the
Pacific Ocean. News stories mentioned that about three thousand square
miles were blacked out. Any system that depended on high-frequency
communication which was not corrected for this effect, might well run
into serious and possibly disabling trouble in the first few minutes of
war.[6] Actually, of course the environmental counterforce attack could
come under the classification of unmodified or augmented disarming attack,
but it deserves a special classification of its own.

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[6]In On Thermonuclear War (Princeton: Princeton University Press,
1960), pp. 428-433, I gave other examples and further discussion of such
possibly unexpected weapons effects. Because of this possibility it would
not surprise any sophisticated observer too much if even a seemingly well-
designed system manned by adequately trained and indoctrinated personnel
failed to operate because of some unexpected human or physical failure.
There are many known examples of systems which almost everybody agreed
should be quite workable when they were designed but which subsequently
revealed vulnerability to subtle effects that had been overlooked. Such
effects are now taken seriously, as was made clear in a recent speech by
President Kennedy in which he said: "We are spending great sums of money
on radar to alert our defenses and to develop possible anti-missile sys-
tems--on the communications which enable our command and control centers
to direct a response--on hardening our missile sites, shielding our mis-
siles and their warheads from defensive action, and providing them with
electronic guidance systems to find their targets. But we cannot be use-
less--blacked out, paralyzed, or destroyed by the complex effects of a
nuclear explosion."

Force Reduction Attacks (Synonym: Partially-Disarming Attacks)

A force reduction attack is an attack designed to produce a major change in a balance of forces by putting out of commission an important part of the attacked force.

There are at least four situations in which one might make a force reduction attack rather than a disarming attack:

(1) where one does not have a large enough striking force immediately available to make the first attack disarming, but where the force reduction that is feasible will be useful. (Perhaps to prevent the other side from making a disarming attack; because later force reduction attacks could accumulate to a disarming level; the offensive ability of the defender's force is then decreased to the point where his bargaining power is affected; or because as a result of civil defense preparations being improvised and the vulnerability of one's civilians is eventually going to be reduced to the point where the reduced force of the opponent can be effectively coped with).

(2) where due to technical problems posed by the defender's forces it would be impossible to disarm him in one strike, but where this objective could be achieved in several strikes. (This could occur, for instance, if it took repeated reconnaissance flights to find the defender's weapons.) The first strike might then be a useful force reduction attack.

(3) where the victim's military target system is so imperfectly separated from his civilian population that a constrained disarming attack is impossible. (Presumably, in such a case, one could make a constrained force reduction attack.)

(4) where a large part of the victim's forces were relatively invulnerable and thus could be destroyed only with unacceptably high exchange ratios.

It should be noted that, by definition, when one makes a force reduction attack one expects to leave the attacked country with enough force so that it will have the capability for massive retaliation. Presumably, one hopes to deter this retaliation by threats of a counterretaliation, and meanwhile prepares to carry out further force reduction attacks, reduce one's vulnerability over time, or negotiate some combination of these three.

Obviously, there is a range of possible force reduction attacks. However, an attack against military targets will be below this range if it is expected to create such a small effect on the enemy's forces as to be justified only by motives other than a change in the balance of forces (e.g., it is probably a symbolic or special instrumental attack as described below).

It should be noted that the balance of forces is, to a large extent, measured by their relative abilities to create civilian damage or to disarm the other side or some combination of these two objectives. Thus an attack on an enemy which noticeably affected the enemy's ability both to disarm the attacker and to cause him civilian damage could be regarded as a significant change in the balance of forces. With the exception of attacks on an adversary incapable of inflicting massive damage in the first place, an attack is considered above the range of force reduction attacks if it is expected to disarm the victim.

The following two points on the spectrum of force reduction attacks are especially significant and are therefore given names:

A. Constrained Force Reduction Attack, the maximum attack on the enemy's forces possibly subject to a specified constraint on the maximum number of civilian casualties.

B. Leverage Attack, an attack in which those of the opponent's forces are attacked which can be eliminated with particularly favorable exchange ratios. This would include an attack which was limited to one or more weak points in the enemy's systems. Thus, if one says, "I will destroy as much of his forces as I can so long as I don't kill more than one million people," one makes a constrained force reduction attack. If one says, "I will attack all of the targets for which I'll get a large effect per weapon fired, e.g., air bases, weak points, etc.," one makes a leverage attack. (Of course these two ideas could be combined in a constrained leverage attack.)

Let us consider the various civilian (countervalue) devastation attacks.

Retaliation

A Retaliation Attack is a large or all-out attack against an aggressor's civilians or their property. Retaliation is similar to "reprisal" (defined below) except that it is bigger, less part of a bargaining process, less defined by rules and more likely to contain an element of revenge. It is usually thought of as a unique, single episode. While a retaliation is not necessarily completely uncontrolled and unlimited, the words "reprisal" or "exemplary" seem more appropriate for more limited attacks. A retaliation does not have to be a rational act but may be touched off as a result of the previous adoption of a rationality-of-irrationality strategy which caused the injured nation to react in an automatic or semiautomatic response to an enemy provocation, or the action may be taken in revenge, or there may be a mixture of these two motivations. Most manifestations of anger are such a mixture.

A retaliation can be either a first or second strike but cannot be an attack in major part against military targets, unless the collateral damage done would by itself satisfy the requirements for retaliation and

this sufficiency was the reason why the attack was not augmented by
adding civilian targets. Thus, "retaliation" is a response in the form
of an attack primarily against civilian targets. If the response on the
contrary is mainly intended to be a useful military action, it will be
called a "counterforce attack," a "countermilitary" attack, a "military"
attack or just a "counterattack." With the word "retaliation" thus
limited, one can distinguish between "retaliating" and "counterattacking,"
which are quite different responses to an attack.

Instrumental Devastation Attacks

An attack can be made against civilians or their property for the
purpose of destroying the attacked nation, delaying its recovery, or even
of preventing for an indefinite period the defender's return to his former
status. The essential characteristic of the Instrumental Devastation
Attack is not its size but its purpose. It is an attack made because of
a deliberate decision that it is desirable either for the world or for
the attacker to prevent the defender from causing trouble in the future.
It has therefore a preventive (i.e., instrumental) motivation. Such an
attack could be made with or without provocation. If made as a response
to provocation, there are likely to be strong retaliatory motives mixed
in with instrumental ones.

Environmental Countervalue Attacks

Environmental countervalue attacks against people are also worth
studying. Such attacks could be made to enhance such effects as long-
term radiation (cobalt bombs), short-term radiation, area fires, tidal
waves, the covering of large areas by blast by a pattern bombing tech-
nique, and so on. There has been much discussion of such attacks in
popular and semi-popular literature, and many people think of them as
either the most likely or the only form of attack.

At first sight, such environmental countervalue attacks do not seem
to make too much sense. It is expensive to be prepared to deliver such
an attack; furthermore, such attacks typically use very large weapons and
the missiles that are required are also large and, therefore, difficult
to protect. In other words, such preparations tend to go in a direction
exactly opposite to that followed by the United States (towards smaller
weapons such as in the Polaris or Minuteman systems). We are turning to
these smaller weapons for a reason--they are easier to protect. This
means that a force designed for an environmental countervalue attack may
not be a very reliable second-strike force. On the other hand, an environ-
mental countervalue attack is a very poor first-strike tactic; even though
it can destroy an enemy's civilians and property, it is not likely to harm
his properly protected strategic force very much. Even when combined with
an environmental counterforce attack, the countervalue portion of the
attack would represent a large, needless diversion of resources.

However, further examination indicates that the case against being prepared to deliver an environmental countervalue attack is not quite as strong as the above would imply. Such attacks are so horrible and destructive that even a very small probability of such an attack--either first or second strike--may indeed contribute either to the balance of terror or to nuclear blackmail. For example, if the Soviet Union possessed twenty or thirty ICBM's, each carrying 100-megaton warheads, even though these ICBM's might be vulnerable, the United States could not be certain of destroying them; the United States might not even know exactly where they are. Under such circumstances, the Soviets would have a pretty good deterrent to attacks by the United States, and many in the United States--particularly those who were willing to believe in the possible irrationality of Soviet decision-makers--might even be fearful of provoking the possessor of such fearful weapons into a first strike against countervalue targets. Environmental countervalue attacks could be carried out for either retaliation or instrumental reasons.

Anti-Recuperation Attacks

One should also consider attacks against recuperation. There are many reasons why a country might wish to be able to deliver such an attack. First, its opponent might have been able to put his civilians under pretty good protection. Indeed, studies have shown that it is relatively inexpensive, particularly if there is one or two weeks' notice, to defend civilians (by a combination of movement and improvised shelters). However, it is much more difficult to protect concentrated wealth in the cities, or such natural resources as forests or the fertility of the soil, if an attacker has the capability to destroy them. Therefore, to maintain its deterrent in the face of countermeasures, a country may wish to be able to concentrate on destroying its opponent's ability to recuperate. Anti-recuperation attacks might be undertaken for either retaliatory or instrumental reasons.

Symbolic Attacks

While we may have introduced some distinctions (and even new ideas) that are not normally used, most of the above discussion on various military and civilian attacks is in an area which has been more or less traditional since 1945. Now we shall come to relatively unfamiliar and even bizarre attacks. We will start with Symbolic Attacks.[7] These are designed primarily to communicate a message as part of a bargaining, threat, and punishment process. Symbolic attacks may be against either civilian or military targets. Thus, one can refer to a symbolic civilian attack.

A. <u>Show of Force</u> consists of the deployment of one's forces in such a way that the enemy can take note of them. There need be no firing of these weapons; the objective is display, not use.

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[7]More discussion of their tactics and role in strategy can be found in Schelling's <u>Strategy of Conflict</u>, Harvard, 1960, Chapters III and IV of "Crises and Arms Control," and all of Escalation and its Strategic Context (see note on page 21).

In classical diplomacy gunboats or larger naval units were conspicu-
ously paraded near the enemy's coastal waters. Or a show of force could
be effected by declaration of partial mobilization, such as canceling
leaves or putting forces on alert. In the days of classical diplomacy
war exercises or maneuvers were held where the enemy could observe them.
Testing large nuclear weapons could be a modern equivalent.

During times of crisis or tension the display of large new weapons
at May Day or other parades may be meant to impress the enemy besides
having the obvious internal uses.

B. <u>Demonstration of Force</u> goes a step further by harmlessly demon-
strating firing of the weapons themselves which even if in the direction
of the enemy is not supposed to leave any marked physical traces of its
having occurred. The classical example is the shot across the bow.
Modern equivalents might be showering the enemy with leaflets from a
missile without a warhead or exploding a nuclear weapon so high above the
enemy's country that it did no damage beyond barely rattling some windows.

C. <u>Demonstration Attack</u> involves the use of the weapons in the di-
rection of the enemy with intent to cause harm or damage but not to a sig-
nificant degree. Unlike the demonstration of force, it is an irreversible
escalation. One might bring down the height of the high altitude burst
in the demonstration of force so as to break many windows. Or one might
blow up an empty mountain top, desert, or forest.

D. <u>Exemplary Attacks</u> are not mere warnings as the last three cate-
gories, but are punitive, deliberately causing damage, whether military or
civilian. The phrase "limited strategic retaliation" and "limited stra-
tegic reprisal" have been used to mean essentially the same thing; but
this phrase seems more artificial and involves a somewhat self-contradic-
tory word usage if the attack is not in retaliation or reprisal. "Exem-
plary attack" seems to be a more accurate, simple and straightforward way
of expressing the idea. Thus we use the previous term in the title of the
LSR strategy because we intend the strategy to be defensive (i.e. retaliatory).

E. <u>A Reprisal Attack</u> is a variant or special case of exemplary
attack which is designed to "match" a previous enemy attack. Reprisal
carries connotations of either revenge or punishment, but this is not
essential. The word can also be used for a number of actions apart from
attacks. Technically a reprisal is a punishing or damaging action de-
signed to be a measured and equitable response to an action previously
taken by the country against whom the reprisal is directed. In inter-
national law a reprisal is an otherwise illegal act committed as retri-
bution for a previous illegal act perpetrated against the party carrying
out the reprisal. Reprisal has the following essential aspects:

1. A reprisal is a response; it is the second (or later)
    step in a chain of actions. Its motivation may be
    revenge or punishment or a way of bringing home <u>nega-
    tive</u> demands, such as "stop that!" or, "don't do that
    again!"

2. A reprisal is measured in relation to the action for which
    it is a reprisal.

    Since a reprisal is not necessarily a one-for-one
    response, this aspect of the concept is necessarily
    somewhat vague. The idea is that "reprisal" should
    be used for actions taken in what may be a continuing
    process, and actions which are thought of as subject
    to "rules" of some kind--explicit or implicit. This
    is one place where the distinction between reprisal
    and retaliation comes in.

3. The object of a reprisal is not the advantage of the side
    making the reprisal, but the punishment of the side against
    whom the reprisal is directed.

    A reprisal is not a cure or a defense; it is an action
    taken when the cure or defense to a previous action
    is inadequate. For example, the Berlin airlift was
    not a reprisal to the Berlin blockade, because the air-
    lift directly reduced the problem caused by the block-
    ade. A blockade of the Baltic against the Soviet Union
    would have been a reprisal.

In the strategic literature the word "reprisal" (particularly in the
phrase "limited strategic reprisal") has been used to refer generally to
small bargaining attacks, e.g., such as the bombing of a single bridge,
a gaseous diffusion plant, or a city--whether or not the bombing is an
"equitable" return blow. However, it seems fairer, and clearer, to con-
fine the use of the word "reprisal" more closely to the dictionary and
legal meaning: equitable responses to previous injury or wrong. Such
phrases as "symbolic attack" or "exemplary attacks," or other appropriate
specific words or phrases can be used for insufficiently or excessively
provoked attacks. (A reprisal is an exemplary attack, but not necessarily
vice versa.)

At some point in the future, if missile systems become widely dis-
tributed, it may become feasible for symbolic attacks to be delivered
covertly or anonymously. In many situations, particularly when the
attacked nation was a recent and obvious transgressor, the message will
be crystal clear and possibly more effective if the attacked nation does
not know against whom to respond. This would make it all the more likely
that there will be more attacks if the transgressor does not mend his ways.
We would then have a very close analogy to the rough and ready justice of
the frontier and vigilance committee.

Special Instrumental Attacks

It is very likely that other kinds of attack will be distinguished
or devised in addition to those we have discussed. We can think of at
least four more kinds of attacks which are worth discussing. Since all
of them would be made for some special instrumental reason, we have lumped

them together, arbitrarily, in the Special Instrumental Attack category. They are labeled Problem Solving, Blackmail Enhancing, Regime Subversion, and Covert or Anonymous. Very briefly these attacks can be described as follows:

A. Problem-Solving: This category is supposed to denote a situation in which some special problem is being presented to the potential attacker who feels that he can solve this problem by destroying people or objects with strategic weapons--or at least that this "solution" is his best or least undesirable alternative. One farfetched but simple example would be the extinction of a mad leader who has access to strategic capabilities and whom one wanted to kill before he could do irrevocable harm. (This example also might be included in Regime Subversion discussed below.)

A similar situation would result if some blackmailer got control of a small number of missiles. Whether or not this blackmailer was a member of any government, one might desperately want to destroy him or his missiles or both. Or one might get warning that some nation was about to launch an exemplary attack and might judge it desirable to forestall the looming attack by destroying the launching site even before transmitting an ultimatum or threat to the would-be attacker. Or some nation might have started to build a Doomsday Machine or something similar and a prudential government might decide to destroy the work in progress, and yet be unwilling to launch a large attack for fear of an unacceptable response. Or, some of the potential defender's forces might be indulging in extremely annoying or threatening but still legal operations; for example, the attacker might be jamming radar or broadcasts from ships at sea and in order to prevent any more jamming, one might wish to destroy the ships. The attack might be carried out covertly in order to minimize the possibility of reprisal. (If instead the attack were intended to give warning or cause pain or fear it would come under the Exemplary category rather than the Other Instrumental.) Or a would be aggressor might destroy some important or critical defensive installations of his intended victim-- perhaps under the guise (or partial reality) of an exemplary attack.

A final, even more bizarre, example could arise in a situation in which a nation is shipping arms to a potential enemy of the attacker. The attack would be directed against the storehouses or ships which were being used or which contained the offending equipment.

B. Blackmail-Enhancing: We have already mentioned that one of the chief purposes of any instrumental attack is the facilitation of negotiations, whether implicit or explicit. Sometimes this can be achieved by an attack on a special target system other than the other side's counterforce or countervalue in the usual sense. For example, one might imagine the U.S., in some desperate situation, destroying the crops of the Soviet Union or China, then pointing out that the only way these nations could hope to survive would be to get food from the U.S. or other Western nation, and that such food would not be forthcoming except on terms. An even more violent example of a Blackmail Enhancing Attack would arise if the attacker destroyed, say, cities 11 to 200 in size of the

defender nation. The attacker would then point out to the defending
nation that it could still survive the war since these ten largest cities
contained all the essentials needed for recuperation, but that now all of
the defender's eggs were in a few extremely vulnerable baskets, and that
the defender might wish to listen to reason. In a war or crisis one
could also imagine the destruction of decision-makers particularly likely
to be intransigent, in the hope that the new decision-makers would be more
reasonable. (The last attack could also be included in the next category,
Regime Subversion.)

        C. Regime Subversion: We have already referred (in two previous
examples of instrumental attacks) to the killing of individuals in order
to change the character of the regime. One could imagine other attacks
whose special purpose was to change the character of the regime or to
overthrow it. For example, one could attack the administrative centers,
troops and police used to keep order, key decision-makers, warehouses,
communications, transportation and so on.

        Some of the symbolic attacks already described could also be used to
create pressures that might change the regime, and these pressures might
be enhanced by the destruction of selected targets. Or one could imagine
the existence of a political opposition to the regime (perhaps created or
strengthened by the pressures resulting from previous escalations or even
by the current escalation) and a very limited attack being launched to
help this opposition group carry through a coup d'etat by eliminating or
weakening selected parts of the existing regime and its organs of govern-
ment and internal coercion. This could be done with or without the co-
operation of the rebels. It might be done to influence the outcome of an
ongoing rebellion or civil war.

        D. Covert or Anonymous Attacks: There are many reasons why a nation
might want to launch covert or anonymous attacks. We have already referred
to one possibility in the discussion of Symbolic Attacks. Another possi-
bility would be a relatively safe way of carrying out any of the first
three Special Instrumental Attacks. In addition the known possessor of a
covert capability is likely to find his ability to deter provocation en-
hanced since it is obvious that he can be more reckless with his Symbolic
Attacks. Indeed, the possessor of a covert attack capability has a rather
effective reprisal against being covertly attacked himself. He can launch
a covert reprisal attack on mere suspicion. If he is right in his choice
of victims, the original attacker will have been punished and will assume
that he has been found out. If the victim is innocent, he is as likely as
not to assume that he is simply the second victim of the original attacker.

Adaptability

        It is clear that the actual operations and tests of the systems may
occur under strange or unexpected circumstances. This could happen pre-
attack because of an unexpected situation and trans- or postattack for the
same reason or because of unexpected weapons effects as in the environ-
mental attacks already discussed. Adaptability is one of a series of items:
adaptability, flexibility, and responsiveness which indicate the same class
of desirable characteristics as viewed from Levels Six, Five, and Four
respectively and we will discuss some of its characteristics in Chapter XI.

CHAPTER IX

PURPOSES, REQUIREMENTS, AND CRITERIA FOR CENTRAL WAR FORCES

In going to Level Five, we ascend from the postures, systems, capabilities, and tactics of the last chapter to the purposes, requirements, and criteria of central war forces as viewed, say, by a systems analyst or a Secretary of Defense. We are going to analyze and describe these purposes, requirements, and criteria in terms of the simplest and most basic scenarios in which we have to specify various levels or kinds of performance. For example, "we strike first, they strike back--how many dead Russians?" "How many dead Americans?" "How long to recuperate?" and so on, relating the scenarios to the component performance analysis of Level Six. The basic categories we are going to discuss are listed below.

<u>Fifth Level: Purposes, Requirements, and Criteria
for U.S. Central War Forces</u>

1. PRE-ATTACK THREATS (DETERRENCE)

>   Second-Strike Retaliation
>   First Strike
>   Graduated (Nuclear) Response
>   Inadvertent Eruption

2. PUNISHMENT OR REVENGE

>   Spasm (Retaliatory) Countervalue Attack
>   Measured (Second-Strike) Attack
>   Graduated Attack

3. IMPROVED WAR OUTCOME SITUATIONS

>   Range of Situations for 1 and 2 Above
>   Preventive War Potential
>   Military Solution to Special Situations

4. ARMS CONTROL PURPOSES, REQUIREMENTS AND CRITERIA

>   Technical Stability
>   War-Fighting Restraints
>   Reduced Levels of Arms
>   Stability Against Cheating
>   Provocation Avoiding and Tension Reducing
>   Avoid Occasions for Stimulating Arms Competition

5. ADAPTABILITY

6. OTHER BNSP PURPOSES

The above list is not a full catalog of all possible purposes and requirements for central war forces. For example, we will not include the launching of unprovoked or aggressive attacks, surprise attacks by U.S. out of the blue, planned preventive war, mass retaliation for minor or moderate provocations, etc. We also leave out most of the purposes indicated on page 109 for Nth countries such as prestige or advanced technology.[1]

One of the really important innovations in modern warfare--one of the really big breaks with tradition--is the extent to which the first three purposes are independent of each other; that is, in the past good capabilities for a) preattack threats (deterrence), b) punishment or revenge, and c) improved war outcome, used to be highly correlated with each other. (Machine guns, tanks, infantry, etc., can be used on either the offense or defense, but today's offense and defense equipment is highly specialized. Thus while in the past, the same equipment and troops could be used for threat, offense, or defense; today, to a startling extent, the three purposes can be separated from each other--in principle. it is possible to do quite well on any one and badly on the other two. Indeed, the difference between the first two and the third should now be obvious, since it was one of the subjects of our quasi-analytical P-Q model in the Introductory Comment section. But, to some degree, one can also separate one and two. That is, one can have a threat capability without actually being able to carry it out for either physical or "psychological" reasons. And, in principle (though probably not in practice), one could have the ability to carry out punishment or revenge without having much capability in the way of threats. As in the EI strategy's method of dealing with preventive war, it tries not to have the threat but only to have the capability.

One major reason for these last anomalies or paradoxes is that deterrence is now really supposed to work, and we are always discussing the possibility and consequences of a one-time phenomenon rather than something we test regularly. The mere fact that the system is never really operated in a realistic context--not even the physical part of the system much less the more subtle nonphysical side, including political, social and other important practical aspects--casts doubt on the most reliable appearing system as well as causing one to fear to some degree that even the weakest looking threats just might work. It really is almost impossible to estimate performance reliably or sometimes even unreliably. It is true, of course, that one way to get verisimilitude is to have objective capabilities, but that is not the only way in the modern world. Indeed there will be circumstances where objective capabilities may not contribute as much to verisimilitude as the right kind of facade. This situation was quite different in the past. Then there were regular "settlement days" (see page 163) in which the calculations of diplomats and professional soldiers were checked. Even those military systems which were not used could still be compared to similar ones which had been used.

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[1]To the extent that these are important for the U.S., and they sometimes are held to be important by officials, we will consider them as by-products and not as a major influence on programs.

Preattack Threats (Deterrence)

It is a truism that there has been at least a partial failure in
the system if the buttons are ever pressed. Today we are in the business
of deterring events, not in the business of using our forces to redress,
physically protect, or fight. While it is a major theme of this report
that there has probably been and still is too great a concentration on
the deterrent functions, yet one must agree that it is far and away the
most important function. And for many, a main part of the argument for
other more objective capabilities arises from the fact that they may make
deterrence more reliable, not that one may use them.

Second-Strike Retaliation (Type I Deterrence)

This refers to the deterrence of a large Soviet attack on the
United States by the threat of a large attack by the United States on
the Soviet Union. This threatened attack could be a "counterattack"
against military forces (counterforce targeting) or a "retaliatory"
attack against civilians and their property (countervalue devastation
attack), or some combination or variation of the two. The U.S. attack
need not follow the Soviet attack in time since the threat of pre-emptive
attack is included in the definition of Type I Deterrence, but it is
clear that as far as United States military policy is concerned, we will
tend to rely on some kind of secure second-strike capability for Type I
Deterrence. Deterrence by the U.S. of such things as all-out attack on
Western Europe, a nuclear attack on an ally, or other extreme provoca-
tions--nuclear or otherwise--that do not include a large attack on the
U.S. or its major forces are not usually included in Type I Deterrence.[2]
(The terms Extended Deterrence and Type II Deterrence will be used for
these other purposes. Extended Deterrence uses the attack threatening
purposes 2 or 3, or residual fear of war 4, as described below.) It is
customary in some quarters to use the word "deterrence" without quali-
fying adjectives when referring to the category which we denote by Type
I Deterrence and use qualifying adjectives for all other uses of the
word. We shall feel free to follow this custom whenever it is convenient
and the context makes the meaning clear. However, when we use the term
"Deterrence Only," this will always be taken as covering a larger class
of strategies than just Type I Deterrence Only. It will include any
strategy (such as Pure Massive Retaliation) that entirely relies on the
efficacy of deterrence to the extent of making no allowance for alle-
viating, limiting, or controlling the consequences if deterrence should
fail. Many of the requirements for Type I Deterrence are by now very
familiar. To quote from a recent book by the editor:

2Arguments exist for wanting to treat our NATO allies as part of
the U.S. for the purpose of deterring a major nuclear strike by the S.U.
This is one aspect of the Contingent Homicide (CH) strategy. We will
assume here that the central sanctuary threshold (see U.S. escalation
ladder on page 23, or S.U. escalation ladder on page 154) is held to be
of great significance--or at least that the issue has not been settled
(but see pages 250 to 251 for statements by Kennedy and McNamara).

Probably the most essential mission of our strategic
forces is to deter deliberate direct attack on the United
States (whether aimed primarily at military forces or cities)
by influencing the enemy's calculations as to the relative
advantages to himself of attacking or not attacking. We
want the enemy's calculations, whether explicitly or implic-
itly made, to indicate clearly that in all circumstances an
attack on the United States would be a serious mistake. It
must distinctly appear that any attack, however carefully
designed or brilliantly executed will result in such a high
probability of an unacceptable amount of damage being caused
to some or all of the attacker's population, industry, or
military forces, that our enemy must rule it out as a choice
even if he is desperate or biased by wishful thinking.

Our ability to deter the Soviets depends on an estimate
of what would be likely to happen if the Soviets were to
strike at a time and with tactics of their own choosing, and
we had to attempt to strike back with a damaged and perhaps
uncoordinated force which must operate in the postattack
environment. The Soviets might attempt to follow up an attack
with threats to intimidate us into limiting our reprisal. Not
only would the Soviet active defenses be completely alerted,
but if the strike had been preceded by a period of tension,
they would probably have been augmented as well. Moreover,
their cities might be at least partially evacuated. Each of
these factors increases considerably the difficulty of guar-
anteeing retaliation adequate to deter.

For this reason, the problem of assuring retaliation
must be viewed as a whole. It is not enough to have large
numbers of nuclear weapon delivery systems before an attack,
or even enough to insure the survival of an adequate number
of them after an attack. We must, in a sense, also assume
the survival of a whole retaliatory system. We must protect
the legal (presidential) decision-making machinery, vital
military personnel, enough military command and control to
execute an appropriate operation, and finally the resolution
to carry out this operation.

Type I Deterrence is in part a psychological matter.
It rests principally upon an enemy's judgment of the likeli-
hood of various possible outcomes of an attack on the U.S.
Theoretically, if by some tricks we could convince the enemy
that we had an invulnerable and overwhelming retaliatory
power, we would not even need the hardware. Moreover, we
might in at least one respect be better off since non-exist-
ent missiles will not go off accidentally. Unfortunately,
in today's world we cannot rely on pulling off such a titanic
bluff. We could not be certain or even very sure that the
Soviets had not found us out. And unless we have faith in

our deterrent we may be unwilling to so much as test it by
standing firm in a crisis. Moreover, unless our own popu-
lation was similarly fooled, internal pressures would
prevent us from standing firm in any crisis. In all prob-
ability the only way to convince all those who have to be
convinced that we have a deterrent is actually to have one.

Our Type I Deterrent must, of course, do more than
deter the most cautious and responsible Soviet decision-
maker, who expects to wind up the cold war peacefully, from
madly risking all in an attack launched suddenly in cold
blood. Our deterrent must be powerful enough to withstand
all of the stresses and strains of the cold war, of sudden
and unexpected crises, of possible accidents and miscalcu-
lations, of satellite revolts, of limited wars, of fanciful
calculations by optimistic gamblers or simple-minded theo-
reticians, and of the tense situations in which 'reciprocal
fear of surprise attack' might destabilize an inadequate
deterrent. We want it to be clear even to less responsible
Soviet decision-makers that we have taken all their most
'optimistic' schemes into account.

Moreover, we want to deter even the mad. It is some-
times stated that even an adequate Type I Deterrent would
not deter an irrational enemy. This might be true if irra-
tionality were an all-or-nothing proposition. Actually,
irrationality is a matter of degree and if the irrationality
is sufficiently bizarre, the irrational decision-maker's
subordinates are likely to step in. As a result, we should
want a safety factor in Type I Deterrence systems so large
as to impress even the irrational and irresponsible with
the degree of their irrationality and therefore the need
for caution. In short, a satisfactory Type I Deterrent for
the United States must provide an objective basis for Soviet
calculations that no matter how skillful, ingenious, or
optimistic they are, and no matter how negatively they view
their alternatives in a desperate crisis, an attack on the
United States would entail a very high risk, indeed virtually
guarantee an unacceptable large-scale destruction of Soviet
civil society and military forces. As has been pointed out,
such a Type I Deterrent may be difficult to achieve because
there are many possible asymmetries in thermonuclear war
that could favor a decision to attack in a paper calculation,
and perhaps in the decision-maker's mind.[3]

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[3]Herman Kahn, Thinking About the Unthinkable (New York: Horizon
Press, 1962), pp. 110-112.

Many people have criticized this description of the requirements for adequate Type I Deterrence as an almost paranoid preoccupation with unrealistic problems and a possibly irresponsible neglect of the real costs (such as acceleration of the arms race) involved in trying to acquire the capabilities described. The editor is now inclined to agree. Indeed, the requirements in terms of military systems which would guarantee the ability to deter under most of the circumstances indicated above would undoubtedly be quite large. There could be a slight tinge of paranoia in the long list of enemies and opponents that the system deters. It may be desirable as was indicated by our discussion of the second P-Q model to have options which permit us to deal with the skillful, the ingenious, the stupid, the irrational, the madman, and the optimistic gambler. However, efforts to acquire the capability to handle simultaneously and continously all possible attackers effectively (as opposed to the more probable threats) divert money, time, and skill from other areas which are important for national security policy. Thus while it may be desirable to have this capability, an attempt to achieve it may detract from our ability to satisfy other important requirements of the total BNSP. Large or even excessive dollar costs of the necessary equipment are not the only strains here. The attempt to achieve Type I Deterrence described above may well accelerate the arms race. Furthermore, a reasonable requirement of our over-all central-war posture is not to look or be too dangerous. We may both look and in fact be too dangerous if we own the kind of equipment which seems adequate for deterring even the most reckless and irrational enemy.

However, the WS and some versions of the FD, MFD, EI, and other central war strategies would indeed acquire capabilities equal to or greater than those described. But the first three also go to a great deal of trouble to look nonaggressive by deliberately having weak active and passive defenses.

The first four paragraphs of the quotation above describe what are probably the most relevant aspects of Type I Deterrence for U.S. strategists to consider seriously. The rest of the definition is also relevant in the sense that one may have to exercise some of the options listed there on the (hopefully rare) occasions that require them. However, in the interest of looking relatively sane, and in the interest of decelerating (or at least not aggravating) the arms race, we may simply forego, at least for the time being, the effort that this capability requires. The five ACWS's we take seriously (MFD, DI, EI, ACD, and NCF) will generally have associated with them a more moderate view of Type I Deterrence requirements for the United States with the possible exception of EI.

Almost everyone is agreed that Type I Deterrence will be technically easier in the Decade: we shall have hardened, dispersed, mobile, or otherwise protected systems; it will be relatively inexpensive to maintain large numbers of weapons; and the capability for command and control will be more adequate and reliable and almost invulnerable. Of course, crises may occur in which Type I Deterrence will be excessively strained, either because of nuclear incredulity growing to the point where opponents push escalation situations to the limit, or because of Nth country problems, or because of accident or miscalculation. But in

most imaginable future situations reasonably high levels of Type I Deterrence are maintainable--at least against the currently identifiable rational (and prudential) opponents. Of course, the possibility of small covert or irrational attacks is not inconceivable in the Decade; this could make an ABM and civil defense program attractive as an adjunct to deterrence. All of the five ACWS's are compatible with such insurance, and all but MFD will have it almost automatically (i.e., almost by definition).

First Strike (Type II Deterrence)

The category primarily covers the use of the threat of a large U.S. first strike as a way of limiting the provocations and tensions which an enemy would dare impose on the U.S. A major distinction within this category is between threats based upon a more or less objective willingness and ability to deliver a disarming first strike and be able to survive the subsequent military actions on the one hand (NCF, CPW, and CFS), and threats of what might be called a resolute or uncalculated first strike (CH, NMR, PMR), which achieve credibility mostly through doubts about our cautiousness, prudence, rationality or control. A major issue in the strategic debate of 1965 to 1975 will be how the credibility of such threats being implemented as a result of extreme provocations by the Soviets varies with different postures and ACWS's.

Because of the growing awareness of the bizarreness of threatening mutual suicide, the credibility of Type II Deterrence threats based on resolve alone is likely to diminish to the vanishing point. This has already been recognized by U.S. strategists, hence the concentration on the five preferred ACWS's. The Soviets have not indicated that they have any concerns about credibility. And it may be that the Soviets with a NMR or a PMR objective can actually attain greater credibility than we can with a NCF, CPW, or CFS objective, but this seems doubtful in the long run. Even more serious to the extent that any nation depends on such threats, it may find itself in the worst of all worlds--its opponent may, wrongly, not find the threat credible, and relying on his miscalculation, may go through with his provocation and thus trigger off a mutually suicidal war. But it is somewhat unlikely that there will be any such irrational committals even by the S.U. in the Decade. Therefore, Type II Deterrence is much more likely to depend on low-credibility threats, greater reliance by the Type II deterrer on the kind of Improved War Outcome to be discussed below, or reliance on the two other threats to be considered below. The whole problem of deterrence and credibility is discussed in Chapter XI.

Of course, Type II Deterrence against Nth countries may become of even greater importance. In the short run this is potentially true of the U.S. opposite China, and it may also be potentially true of the Soviet Union versus Europe or China, and in the long run the Gamma Worlds become almost inevitable. Thus there are likely to be a great number of possible opponents who the S.U. or U.S. could successfully hope to (and need to) deter by Type II Deterrence, and if the deterrence failed, be able to fight, survive, and win the subsequent war. (See companion report on Nth Country Problems for discussion.)

Graduated (Nuclear) Response (Graduated Deterrence)

The term "Graduated Deterrence" was originally coined by Sir Anthony Buzzard to refer to the possibility of limited responses to the whole spectrum of possible provocations. Admiral Buzzard thought it desirable to tailor one's response roughly to the same part of the spectrum as the provocation. Thus, for a conventional attack on Europe, one might reply conventionally or use tactical nuclear weapons. For a tactical nuclear attack on Europe, one might use tactical nuclear weapons or reply with measured destruction behind the Soviet lines, and so on. Since, in this study, we are interested in the central-war area, Graduated Deterrence will correspond to such tactics as Exemplary Attacks and Reprisals, defined and discussed in Chapter VIII.

Simply because first strikes are likely to become somewhat less credible, there may be greater reliance on Graduated Deterrence or various other types of Symbolic Attack. One conceivable method would be to have a small number--possibly somewhere between 5 and 100--of "Presidential Missiles," especially flexible in their capability, and responsive in their command and control arrangements to the immediate orders of the President. These could be relatively vulnerable, since they are not protected by their own retaliation capability but by the deterrent as a whole. They could be used as a tool for Graduated Deterrence which is under the direct command of the President. Graduated Deterrence could play a role in any of the ACWS's, but it is, by definition, the central theme of LSR. Some form of this threat could be essential in a Delta or Epsilon World. It should also be realized that this threat is always accompanied by some degree of the threat about to be discussed.

Manipulation of Fear of Inadvertent Eruption

A bizarre method of influencing the behavior of an opponent in a firm balance of terror environment is the deliberate threat of inadvertent eruption. While the idea is an old one, and has been considered many times with varying degrees of sophistication, the first serious published treatment seems to have been an article by Schelling, "Threats Which Leave Something to Chance," included in his book, The Strategy of Conflict.

In its most extreme form the manipulation of the fear of inadvertent eruption might go as follows. Let us assume that two nations have such strategic systems that all-out war between them would be mutual homicide. Let us imagine that these two systems are built so that in a tense situation there is some probability, say one chance in a thousand per week, that they will go off accidentally. Assume also that both nations insist on maintaining the probability of total and mutual homicide until the other side backs down or compromises. We now have a situation in which there is an intense "competition in risk-taking."

The actual situation is, of course, not so stark. Nobody really knows what the probability of war is under different circumstances. We do not even know whether it goes up or down in a tense situation. It is, for example, quite conceivable that the extra care and concern which people have in tense situations might more than compensate for the seeming extra danger that arises from weapons being on alert and men operating under strain. Therefore, in practice, this strategy increases the apparent probability of the risk of war: it gives the impression that it is dangerous to allow the situation to drag out. In some cases, this apparent probability may in fact be a good objective estimate of the actual situation. In other cases, large and frightening as the apparent probability might be, it might seriously underestimate the actual risk of war; and in still other cases, it might overestimate it.

While this concept of manipulating the risk of war in order to obtain foreign policy advantages seems bizarre, the bizarreness comes from the scale of the threat and from its being made explicit; the tactic, itself, is used regularly--as the name of the first firebreak on the escalation ladder, "Don't Rock the Boat," suggests. Short of absolute surrender, or unilateral disarmament, there is always some probability, no matter how small, of inadvertent eruption, and whatever a nation does must affect this probability. It is also clear that affairs cannot be conducted in such a way as invariably to minimize this probability. Indeed, it sometimes is impossible to know for certain what actions would in fact minimize such a probability.

Fear of inadvertent war can be a very effective pressure because neither side really understands their present weapons systems, nor really appreciates the various ways in which an inadvertent war could occur. A completely realistic estimate of the risks that are daily run is impossible.

An inadvertent war, of course, could be only partially inadvertent. As a crisis develops, one side could become so desperate that it actually calculated (or miscalculated) that its least undesirable alternative was to go to war, even though it had realized earlier that if it were to be driven to such a point it should have accommodated.

There are a number of ways of exploiting this situation. Unpleasant and reckless as such an exploitation may seem, it is necessary to realize that it is regularly done to some degree, since the competitive risking of inadvertent war is unavoidable as long as weapons systems and confrontation exist. In addition, whatever the risk may be in normal times, almost all believe it is increased when there is tension or crisis and yet almost no one is willing to accommodate to all of the potential enemy's demands in every crisis. Thus, our willingness to undergo tension or crises automatically involves some increased threat to the other side.

It should be clear that both the Soviet and U.S. escalation ladders already described are, in part, an attempt to describe this tactic. We will discuss later to what extent this feared eruption may be accidental,

unintended, inadvertent or unpremediated and to what extent intended, deliberate, or premediated. (The connotations of all these words are appreciably different even when the denotations are the same.) There are many who believe that at some time in the Decade this kind of deliberate exploitation of a residual fear of war is likely to be one of the few capabilities left by which the United States will be able to threaten, deter or limit the Soviets and vice versa. If so, unless we have a fairly strong capability for Improved War Outcome, we are in trouble; if one manipulates the risk of war, one is presumably risking war. Yet, it is still possible that this tactic might be deliberately used as a desperate last-ditch measure, even if only very rarely. In other words, manipulating the risk of war is a substitute for going to war. We do not expect to go to war more often than once in a generation, if that often! Perhaps we will believe we can still run an appreciable risk of war two or three times a generation.

Punishment or Revenge

There is actually a whole spectrum of actions that we can consider under this heading which can be done for a variety of purposes, such as any of the purposes that were associated in the last chapter with symbolic attacks (that is, warning, threatening, bargaining, punitive, fining, or deterrence reasons). We are now talking about the acts themselves rather than the messages, but for most purposes these attacks themselves are messages and this in fact may be their primary reason for being made. The second reason for having a capability to punish or revenge is to be able to carry through various kinds of rationality-of-irrationality or committal strategies. In particular, we need a final sanction to deter certain acts by our opponents. Lastly, it is conceivable that one would want punishment or revenge to satisfy one's own emotions. This is more than conceivable; it is often a major element in people's consideration. However we would suggest that these issues are too large to let primitive emotion play a dominating role. If it is to be considered it should probably have a relatively low priority. In fact in the Catholic Just War doctrine (discussed in the next chapter) this objective is specifically disallowed.

Spasm (Retaliatory) Countervalue Attack

All that is required here is to be able to get all the buttons pressed and to have some reasonable allocation of the attack, since one would not want all the missiles to go to the opponent's two largest cities, nor would one want these two cities to go unscathed. This kind of attack is, of course, the ultimate sanction and should presumably be low down on the priority list and not the first reaction to all kinds of contingencies, yet some would disagree. Proponents of MD and FD often have no other threat which is deterring enough, and supporters of CH, PMR, and NMR specifically depend, to some degree or other, on the frightfulness of a spasm attack to achieve sufficient dissuasion (see Gallois' equation on page 284).

Some strategists have suggested using the threat of this attack to
deter such things as attacks on command and control systems. If the enemy
suceeds in destroying the basic system for conducting a controlled war,
one would have a primitive back-up system (which could be fail dangerous
on this particular contingency and rely on a preset firing doctrine plus
positive assurance that the main C & C has been destroyed) that initiates
a spasm response. One can then say to the opponent. "if at great effort
you destroy the main system of command and control you have only hurt
yourself." In fact we suggested that such a system might be desirable for
a relatively small Nth power who wished to use the special kind of con-
trolled response strategy discussed on pages 107-108.

Graduated Attack and Measured Attack

While graduated and measured attacks could play a role in almost any
of the ACWS's, it is, by definition, the central emphasis of the LSR
strategy.

We will consider the graduated and measured attacks together, making
the following distinction between them. In the graduated attack we are
interested in the amount of damage that is done and are attempting to
limit it in some way which is appropriate. In the measured attack we are
interested in the size of the attack and less concerned with the damage
done. In other words, in a graduated attack we are trying to destroy a
specific target without, perhaps, doing much collateral damage, and in
the measured attack we are trying to get off a specific number of missiles,
probably (though not necessarily), with an attempt to maximize the damage
that can be done by these missiles. The graduated attack is appropriate
to the symbolic attacks where the communication presumably derived from
the attack will be deduced from the damage that has been done. The meas-
ured attack would be appropriate where, for example, we had been struck
in some way and wished to retaliate but also to keep a residual force for
further bargaining purposes. The measured attack is particularly appro-
priate in the confusion of a large-scale war where one does not really
know the exact state of his forces or what, in fact, is happening to the
other side. The measured attack might also be a particularly useful tac-
tic for the controlled response strategy of Nth countries as discussed
previously.

Improved War Outcome Situations

Since it is not impossible that deterrence could fail or that escala-
tion to the upper rungs of the ladder could take place, it becomes desir-
able to consider ways and means to limit damage to the U.S. and allied
populations and wealth and to improve the military and political outcome
for the U.S. and its allies, if a war should occur.

Improved War Outcome is supposed to include all measures taken to re-
duce the damage and improve the military-political outcome of a war. Ob-
viously there are a great variety of measures that contribute to Improved
War Outcome. The following capabilities might well be included: civil

defense, active defense against bombers or missiles, warning systems, measures for destroying or disabling enemy forces before they are launched (but after the enemy has been committed to the attack), measures to aid in bargaining, negotiating and communicating with the enemy, and, in general, any equipment that could facilitate fighting the war, preserving intra-war deterrence, or terminating the war under conditions which are as satisfactory as possible to us.

Sometimes capability for improving the outcome of war is sought for its own sake and not for the gains it might bring in deterrence or foreign policy or even bargaining ability during the war. In this case, we speak of it simply as Insurance. Thus the term Insurance is supposed to imply that all the measures are being taken for narrow, prudential reasons of the sort used in arguing for accident insurance or safety belts.[4] The basic thought is that war can occur and that it is better to survive the war than not, and--other things being equal--better to win than stalemate, and better to stalemate than lose. Not only are these insurance measures not thought of as actively improving the U.S. capability in foreign policy before the war starts, but in some strategies (MFD, DI, WS, ACD, and perhaps LSR) they may be specifically designed to assure the potential enemy that they will not be used to further war-threatening purposes.

There are some special kinds of Improved War Outcome that may be sought. One is part of the Preventive War Potential discussed separately below. Another would be to take measures to ensure that if war comes, Russia's recovery will be slower or less successful than ours. The purpose would be to make it impossible or unlikely that a fast-recovering or completely recovered Soviet Union could again threaten the United States.

Another special form of "Improved" War Outcome (one that is not being recommended by the authors of this report, but which some Americans seem to think is important) are measures designed to guarantee an adequate revenge; that is, insuring retaliation of a magnitude that is clearly greater than is believed to be necessary or desirable for deterrence purposes in order to punish the Soviet Union for having started or occasioned the war.

Because Type I Deterrence may become easier, the Soviet Union may procure a Type I Deterrent which, if used in a countervalue devastation attack, would swamp any likely capability we would have for Improved War Outcome. If this is so, this means that Improved War Outcome is likely to make sense only in an arms-control environment, against third powers, or in a controlled war in which both sides are discriminating in their targeting (but see discussion on pages 190 to 191 of Chapter VIII on feasibility and desirability of Improved War Outcome).

The last two situations may well become important in the future. The implication for the Strategic Debate is simply that we shall have to design our forces much more carefully to exploit special characteristics of such situations. This means, among other things, great flexibility. It may turn out that the best way to obtain the flexibility to handle such diverse situations would be to procure several more or less separate systems, or bases on which systems can be built rapidly.

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[4]Few if any people drive faster or more recklessly if they have insurance or safety belts.

Preventive War Potential

This purpose is similar in spirit (despite its rather aggressive name) to the Improved War Outcome situations described above. The idea is not that one would plan a preventive war or even threaten one, but that circumstances may occur where it is both vital and justifiable to start one. For example, one could imagine that really reliable information came that an attack was planned on the United States. One possible maneuver would be to announce to the other side that we knew of the approaching attack and were prepared to negate it, and possibly even describe the measures we had taken. If for some reason the above was not a feasible strategy, then another strategy which a responsible U.S. government could possibly take (always assuming that the opponent had done something which justified a declaration of war and we felt the probability of an attack was high enough) might be to pre-empt.

Similarly, it is conceivable that we might go through a series of escalation steps with some nation which committed one outrageous provocation after another against us, and might finally decide that we simply had to eliminate the opponent. For example, one could imagine this occurring in a context where war had been declared and where the war was being fought in a very restrained way, but where we decided to terminate the war by escalating up rather than accepting an undesirable compromise peace. (Such a situation might be similar to that in which the British found themselves early in World War II when they felt they simply could not do business with Hitler, and that no matter how generous an offer to end the war the Nazis made, no terms would be satisfactory which included the survival of the Nazi regime.) It is possible that even a defensive-minded U.S. government might be interested in having such capabilities or in being able to procure them as a hedge against such bizarre circumstances. As mentioned, Preventive War Potential is analogous to a vigilante committee in a lawless community and not to an aggressor hoping for positive gains.

While this purpose may seem a little bizarre in the present, in the future there may well be need of this capability against unorthodox opponents. To the extent that such a capability turns out to be feasible, it has a somewhat greater chance of being so because of Soviet incompetence than because of outstanding efficiency of one of the First-Strike strategies. Such incompetence is more likely if the Soviets do not feel too threatened--which argues for the EI or NCF strategies over the more aggressive Central War strategies. This is one case where greater efforts may be counterproductive. For example if the U.S. moved from U.S.-A U.S.-B in an attempt to maintain superiority and the S.U. moved as a result from S.U.-A to S.U.-C, the U.S. and S.U. would have both lost from the change.

Arms Control Purposes, Requirements and Criteria

There are a number of technical requirements that must be laid on the central war forces for arms control reasons. We can think of these as being requirements rather than purposes since they are at best second-

order purposes. They would not occur if we did not have the other pur-
poses first. Among the requirements are technical stability, war-fighting
restraints, reduced level of arms, stability against cheating, provocation
avoiding and tension reducing, and avoiding occasions for stimulating arms
competition. We will not consider these requirements in any depth in this
report but will emphasize some of the arms control military-political ob-
jectives (in Chapter XI). The reader should not conclude from this lack
of emphasis on these questions that they are unimportant. The contrary is
true. In some ways they have tended to dominate U.S. planning in the last
four or five years, particularly the last two requirements on the list
given above. At least the editor of this report judges that while there
are many cost-effectiveness reasons for the United States not going enthu-
siastically into ABM field or civil defense, these have not been the domi-
nating considerations. Among the more critical have been arms control
purposes--particularly the avoidance of occasions for stimulating a new
defense-offense arms race by going into such new fields as ABM and civil
defense. Such central war strategies as MD, FD, MFD, DI, and ACD tend to
be dominated by such arms control considerations.

Flexibility

Probably the most important requirement here is to be able to change
war plans rapidly, to be able to use the various attacks described in the
previous chapter as easily available options and tools, and to allow ade-
quately for the use of controlled war tactics and strategies.

This is a very important characteristic of strategic forces--the
ability to adapt relatively easily and efficiently to gross changes of
the environment, to extreme changes in and emphasis between purposes, to
new problems as they come up, or to new values as we become aware of them
or as we adopt them. The actual history of our strategic forces indicates,
for example, that they may rapidly increase in size[5] or may drop precip-
itously as they did after World War II. There may be a virtual disregard
of the arms race as in the mid-fifties, or extreme concern as in the mid-
forties and the late fifties and early sixties.

It has been estimated[6] that technological revolutions in the art of
strategic war now occur every five years or so, or possibly even faster.
In addition, the Decade could see some startling political and economic
changes as indicated by our discussion of various world futures in Chapter V.
This means that the environment in which our strategic forces will operate
may be quite different from what we expect today. Hard as we work to look
at the alternatives, it is likely not to have been hard enough. Bizarre

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[5]For example, in June 1950, Congress was debating whether the stra-
tegic budget should be 14, 15, or 16 million dollars, but when the North
Koreans marched into South Korea, Congress, within a few months, authorized
60 billion dollars of new obligations.

[6]See On Thermonuclear War (Princeton University Press, 1961) page 315.

and imaginative as some of the things considered in this report may seem,
the net judgment on this report a decade or so hence may well be that it
was relatively unimaginative--at least about the possibilities, if not
the realities. It is as likely to be condemned for not looking enough at
seemingly bizarre situations as for a paranoiac preoccupation with such
situations. Therefore, the greater the adaptability and flexibility built
into our systems, the better. This might be an extraordinarily important
criterion for a satisfactory system. One way of coping with some of the
problems is to examine in detail how to hedge current programs to be pre-
pared to meet many disparate possibilities of future wars.

These changes may occur at the first three levels of analysis (goals)
as well as the last three (technology, postures, tactics, etc.). For
example, moral issues may become more important. While the original moti-
vation for the examination of the No First Strike at Cities policy[7] was
basically prudential, tactical and strategic, one of the major arguments
for it is that it is more moral than the city-busting strategies of Finite
Deterrence. (See discussion of Just War Doctrine in next chapter.) It is
a peculiar characteristic of human beings that once they open the door to
moral arguments they find themselves unable to dismiss them again. The
prudential, tactical, strategic situation may change, but once people have
become aware of their moral liability they continue to pay attention to
moral considerations. The operational situation might change back, but
many of the individuals will not reverse their positions again. In any
case, more and more searching and (let us be frank) embarrassing questions
are likely to be asked about the ethical and moral responsibilities of the
nation's voters and decision-makers in the future when they decide to con-
tinue to possess (and threaten use of) the kind of forces which we possess
and threaten with today. We discuss all these issues in the next chapter.
In any case, the central war forces must look and be worth their cost, look
and be compatible with ethical and moral values, look and be compatible with
democratic values, look and be compatible with alliance requirements, look
and be compatible with political constraints. All of these requirements
and constraints which tend to arise out of our over-all BNSP's or the
first three levels of analysis can change rapidly and the forces must be
able to respond to these changes (i.e., to meet changes in BNSP's).

Other BNSP Purposes

Thus there can be a whole series of other requirements for our central
war forces. They should not cost too much money; they should not even look
as if they cost too much money. They must be in accord with U.S. standards:
in particular they must not be too militaristic; they must not cause too
many accidents in peacetime; they must be suitably careful of the persons
implicated by them, not only by considering their material well-being but
their social and ethical well-being. Each of the BNSP themes on page 47
might give rise to special requirements in addition to those that can be
deduced from the choice of Central War Strategy.

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[7]See page 21 as well.

We might consider specifically the civil defense issue here. One
important objection to some suggested civil defense programs is that they
may make too big a change in our normal peacetime operating procedures.
In particular, it might be difficult to sell large civil defense programs
without indulging in a jingoistic and chauvinistic type of propaganda, or
it might be difficult to get such programs to work well without institut-
ing some degree of garrison state. A careful study of these issues indi-
cates that these objections do not arise for the right kind of civil
defense programs. That is, civil defense programs can: (a) be designed
so as to minimize the above effects, (b) accept some of the costs asso-
ciated with minimizing the above effects, and (c) accept some degradation
of performance, if necessary. In other words, it is probably true that
it would be good to practice evacuation programs, but if one only trains
cadres and spends more money getting better cadres, the degradation of
performance by deferring widespread popular participation until the crisis
is probably relatively small and acceptable. One way to characterize the
above approach is to say one might wish to professionalize civil defense--
treat it more like one treats normal military forces or the police or
public health--rather than to treat it as a polio or Red Cross campaign.

It should be clear that some of the criteria suggested above that
could be required by various BNSP's for civil defense programs will affect
Level Six and Seven considerations as much as Level Five.

Controlled War and First Strike Capabilities

Probably two of the most important and controversial differences
between the various strategies is their use of first-strike threats and
their actual ability to fight and survive a war. This ability is, of
course, a function of many variables. One of the most important components,
and the one which is most likely to reflect the conscious understanding
of decision-makers of the choices, is the controlled war ability, i.e., the
ability to conduct operations in such a way as to further the top decision-
makers' views of what the national interest is as opposed to following a
prepared war plan or as opposed to fighting a war whose main objective is
to punish the other side--in particular as opposed to the idea of a spasm
war. If we consider these two variables, the likely degree of control that
would be expected if deterrence failed and the emphasis on first-strike
threats, we have a two-way coordinate system on which we can map all the
strategies. Typical points are given on the next chart where we have put
down several versions of each strategy, since, as we have kept empha-
sizing, a large number of different kinds of people may still advocate
the same package--at least at the level of aggregation that we have de-
fined these packages to date. This chart also indicates roughly where the
total range of individuals might be found, i.e., we show a series of boxes in
which we give plausible ranges on these two variables for all the varia-
tions of the different strategies. We have indicated that these ranges
overlap. This occurs either because individuals disagree on the defini-
tions (defining the scenarios) of these strategies or because outsiders

EXPLICIT FIRST
STRIKE THREATS

SOME FIRST
STRIKE THREAT

AMBIVALENT

NO FIRST STRIKE
THREAT

ABSOLUTELY NO
FIRST STRIKE

CERTAIN
SPASM WAR

SPASM THREAT
BUT PROBABLY
CONTROLLED WAR

CERTAIN
CONTROLLED WAR

PMR-1
CH-1
CFS-2
CFS-3
CPW-1
NMR-2
CFS-1
NCF-4
LSR-3
NCF-3
NMR-1
ACD-3
EI-4
DI-1
NCF-1
EI-2
NCF-2
WS-2
MFD-1
ACD-2
EI-1
FD-1
EI-3
LSR-1
ACD-1
LSR-2
WS-1
WS-3
MD-1
FD-2
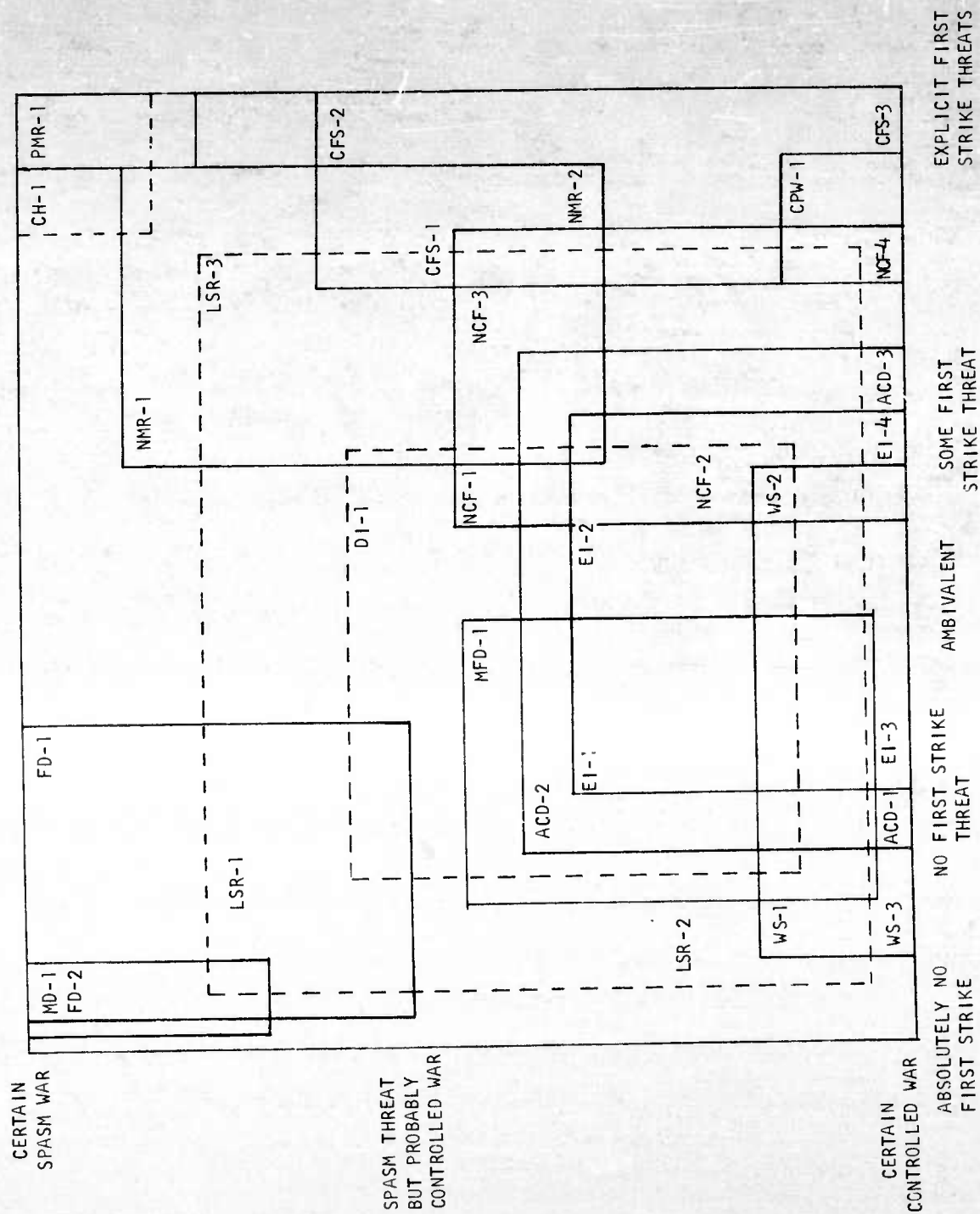
will judge them differently, even when they have judged them to be success-
ful. (There is no functional difference between the dotted and the con-
tinuous lines except to make the diagram easier to read.)

In considering the possibility of fighting a controlled war we must
consider how we can protect our people and property, and even some of our
military systems. As mentioned in the discussion on Improved War Outcome
this is done by active military operations such as counterforce (fast or
slow), by having active and passive defense, and perhaps most important by
intra-war deterrence, i.e., on deterring certain actions--even after the
war has started--by threat that one will respond in a way which the oppo-
nent will find unpleasant or undesirable. And of course, the special re-
quirement for intra-war deterrence is self-restraint. That is, if one has
threatened to do something in the case of certain provocations then one
must refrain from doing it if the other side does not commit the provoca-
tions. In addition a controlled war is, in a very real sense, "a conti-
nuation of politics by other means" and one must continue politics--that
is, to bargain. Bargaining is done through operating the military forces
so as to improve our threat position by eliminating the enemy's capability
to threaten us and by increasing our capability to threaten him. Bargain-
ing is also done by using slow-motion and abatement tactics so that there
will be pauses in which messages can be delivered and pondered. In addi-
tion, it may use special attacks as indicated in the last chapter. This
will be discussed further in Chapter **XI**. And finally one bargains by bar-
gaining--by making offers and accepting counteroffers. Here again some-
times the best bargaining is done by making an offer on a take-it-or-
leave-it basis. To fight such a calculating war well requires survivable
systems, command and control survival, flexibility and responsiveness.
All except the last are Level Five qualities. In addition, one must use
proper tactics such as: knowing what he wants, keeping his head, communi-
cating with the enemy, creating pauses, making feasible demands, offering
appropriate concessions, and so on. All except the third and fourth of
these Level Four objectives will be discussed in Chapter XI, but it should
be clear, even at this point, that they are essential.

A Level Five (Military) Analysis of Escalation and Deterrence

We will conclude Chapter IX with a consideration of possible inter-
actions between two escalation ladders, the opponent's and our own, in
situations in which nuclear weapons are employed. We will also consider
some aftermaths of attacks. In this discussion we will slight some of
the dynamics of the analysis and concentrate upon simple "if...then..."
statements: a purely military analysis of threat-counterthreat situations
that excludes consideration of almost everything except the relationship
and interaction of the military capabilities of the two sides (as con-
trasted with the section on deterrence and credibility in Chapter XI which
also considers who, whom, alternatives, situations, and why). It is de-
sirable to begin the discussion by examining a deterrence diagram, or
matrix, which sets forth a range of "if...then..." situations. We will
start with one that illustrates the U.S. deterrence of Soviet provocations.
In this matrix, the columns are labeled with the Soviet military objective

in carrying out a provocation, and the rows are labeled with the U.S.
response. The boxes of the matrix therefore identify a deterrent situ-
ation in which a possible U.S. response is matched against a Soviet pro-
vocation. In order to orient the reader we will begin by describing
briefly a deterrent diagram which was found to be useful by one of the
authors some years ago. As shown below, this diagram classified the then
interesting deterrent situations into six categories.

TABLE I

Different Deterrent Situations

S.U. ACTION U.S. THREAT	MAJOR STRIKE AGAINST U.S.	EXTREME PROVOCATION	OTHER PROVOCATION
SOME KIND OF "ALL-OUT" ATTACK ON S.U.	Type I[8] Deterrence	Type II Deterrence (NCF, CPW, CFS)	Old Massive Retaliation Policy (NMR, MR, or CH)
LESSER VIOLENCE OR THREATS	Unnamed, but sometimes included in Type I Deterrence	Graduated Deterrence (Exemplary and Reprisal Attacks) (LSR)	Type III[8] Deterrence

The usefulness of the above classification was that it focused atten-
tion on two major issues. The Type I - Type II distinction focused atten-
tion on the difference between deterring attacks directed at the United
States or its major forces and deterring extreme provocations, such as a
nuclear or even conventional attack on Europe, while the Type II - Type III

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[8] All the ACWS's except MD pay considerable attention to Type I deter-
rence, and all of them can be associated with different capabilities in
the Type III deterrence area, the chief interactions coming in through
the credibility of the first strike threat and the "psychological" environ-
ment of escalation adequacy and assurance that is provided by the ACWS.

distinction focused attention on the inappropriateness of threatening to
use massive attacks to deter relatively minor or moderate provocations.
Many individuals, both in and out of government, had, vaguely, thought
simply of a single kind of deterrence--a massive blow at the Soviet heart-
land--and had often assessed its credibility by thinking of situations in
which the Soviets first struck at the U.S. homeland. Assuming that this
deterrence was credible, they went on to credit it with deterring all
lesser provocations. Almost as soon as the distinctions were made clear
(mostly by the growing power of the Soviets, which turned deterrence into
a two-way street) it became obvious that Massive Retaliation was not ade-
quate. Recently Type II Deterrence has also come under attack as too un-
reliable to be useful for all the situations it is supposed to cover. In
recent years a different classification has been suggested by D.G. Brennan[9]
who favors four categories of deterrence--identified as "A" through "D."
His A and D type deterrents are the same as the older Types I and III,
while his Type B refers to the deterrence of extreme nuclear provocations
by threat of large attack, and his Type C to the deterrence of extreme
nonnuclear provocations by threat of large nonnuclear attack. The reason
for Brennan's formulation is that he believes that provocations which do
not use nuclear weapons are, at least for arms control purposes, very dif-
ferent from provocations which do--no matter how extreme the nonnuclear
provocations; and he wishes to focus attention on the importance of such
things as a No First Use agreement. Therefore it is convenient for Brennan
to have a terminology which easily distinguishes between any kind of non-
nuclear provocations and any kind of nuclear provocations. But because we
now have even more issues to consider we will use an even finer breakdown.

Exemplary and Reprisal Attacks have some tendency to overlap with
both the unnamed and Type III portions of the Deterrent diagram. And we
believe that Type III Deterrence and Graduated Deterrence will play a more
important role in Department of Defense planning in the future than it does
now.

Another important distinction is between Active and Passive Deter-
rence. Active Deterrence involves an act of will: a conscious decision
to carry through the threat. In Passive Deterrence, things have been so
arranged, or are arranged, so that if the provocation occurs the carrying
through of the threat is relatively automatic and involuntary.[10]

Type I Deterrence is often thought of as passive. It is assumed that
if the United States or its major forces are struck there would be no
doubt about striking back with surviving American forces. Similarly, Type
II Deterrence is often thought of as active: if, for example, the Soviets
attacked Europe with conventional forces and overran NATO conventional
forces, it would require a conscious decision--an agonized one--to attack

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[9] In *Arms Control, Disarmament and National Security* (New York:
George Brazillier, 1961), p. 25.

[10] The difference is close to but not identical with the distinction
made in the next chapter between threat and warning.

the Soviet Union with strategic forces. However, these correlations
should be thought of as propositions rather than as definitions. Indeed,
one notes that either proposition can be very misleading in specific cir-
cumstances.

Thus one can write many plausible scenarios in which the United States'
major forces are hit by a Soviet attack and yet the United States is de-
terred from retaliating against the Soviet Union with a large strike. One
can also write plausible scenarios in which a Soviet conventional attack
on Europe inadvertently erupts into a major thermonuclear war triggered by
a U.S. attack on the Soviet Union which was not really deliberate or pre-
meditated. In these scenarios, then, Type I Deterrence must have been
active, since a provocative act occurred but the threat was not executed.
Similarly, Type II Deterrence proved in these scenarios to be passive, since
the initial decision of the United States had been not to carry out the
threat, yet it was carried out anyway. If such scenarios describe plausible,
or at least conceivable possibilities, then one cannot call Type II Deter-
rence active and Type I Deterrence passive; rather one must ask to what
extent Type II Deterrence is active and to what extent Type I Deterrence
is passive. We will ask such questions when we discuss the richer U.S.-
S.U. deterrence diagram considered below.

Refinements of the Concept of Deterrence

Let us now consider a finer division of possible deterrent situa-
tions corresponding to the many attacks we described in Chapter VIII.
Here, as elsewhere in discussions of such matters, the reader may need
to suspend his disbelief in order to follo an intellectual exercise in
the choices that could conceivably be faced by decision-makers in extreme
situations. We are dealing only in the action-threat-counterthreat part
of the deterrence equation. We will consider first Table II, a matrix
representing a U.S. response to a Soviet strike. We will then consider
a similar matrix (Table III) representing a Soviet response to the U.S.
response to the initial Soviet Exemplary Attack. It should be noted that
the disarming options would vary with the time period being considered;
the tables as shown are for the early part of the Decade, while the text
discusses some of the changes that may have to be made in the middle and
later portions of the Decade. The check marks indicate likely choices
and the question marks represent choices which may be considered.

While there is some tendency for U.S. responses to lie near the
diagonal (return tit-for-tat), this tendency is not uniform. In the
present environment, for example, if the U.S. were struck even by a
rather low-level attack, it might consider the appropriate response to
be a disarming strike of one kind or another to settle the Soviet prob-
lem once and for all. The likelihood of such a response presumably
depends on higher-level considerations: 1) how the U.S. interprets
the long-term significance of the attack (e.g., Is this the first in a

TABLE II

U.S. RESPONSES (1963-1967) TO U.S.S.R. PROVOCATION

U.S. Threat \ U.S.S.R. Action	1. Devastation Attack	2. Environmental Counterforce	3. Augmented Disarming*	4. Unmodified Disarming*	5. Restrained Disarming*	6. Exemplary Attack	7. Show of Force or Demonstration	8. Local Nuclear War--Military	9. Local Nuclear War--Exemplary	10. Non-Nuclear Extreme Provocation
1. Augmented Disarming	✓	?	✓							
2. Unmodified Disarming	?	✓	?	✓	?	?	?	?	?	?
3. Restrained Disarming	?	?	?	?	✓	?	?	✓	?	?
4. Declaration of War						?	?	?	?	?
5. Exemplary Plus						?	?	?	?	?
6. Exemplary Equal						✓	?	?	?	?
7. Exemplary Minus						?	?	?	?	
8. Demonstration							?	?	?	?
9. Show of Force								?	?	?
10. Local Nuclear War--Military					.			?	?	
11. Local Nuclear War--Exemplary									✓	
12. Conventional Capabilities										✓
13. Nonviolent							?			?

*We do not believe this to be possible but the Soviets might.
Our response depends to some extent on their being wrong.

series of atomic holdups? Is it the act of a fanatic who may next time
take out the whole defense system? Will our people and our allies be de-
moralized? Could this attack bring down the whole alliance structure?
etc.); 2) the estimated effectiveness of our disarming strike and follow-
up attacks and negotiations (see below) under realistic conditions and
constraints (i.e., Can we do an adequate job without causing too many
casualties to ourselves, allies, neutrals and even the enemy?; How re-
liable is our estimate?; What are the alternatives when judged the same
way?). But all of these factors may, of course, prove to be irrelevant
to the actual decision since we may in fact not calculate but may react
emotionally or by doctrine.

In the present and, quite possibly, the future balance of power, the
choice of a disarming attack in response to U.S. provocation will probably
not be available to the Soviets (barring Soviet technical breakthroughs
or changes in U.S. strategic posture, or a weak link in the U.S. system).
Should they resort to all-out war, it probably would be out of anger or
other emotional responses, out of inflexibility of plans--or stupidity
(always assuming that the current estimates of the strategic equation are
correct). It is also believed that only the lower Central War options
will be available to either opponent in '70-'75, but that there could then
occur U.S.-Chinese confrontations, or Soviet-European ones, in which the
balance might again be asymmetric. However, even if there were a strate-
gic imbalance between the United States and the Soviet Union, its "use-
fulness" would be dependent upon the quality of strategy, upon the com-
petence of target analysis and on possessing appropriate forces including
an effective, discriminating "weapons busting" strike force. By 1970 the
major powers are likely to understand the strategies conceptually, but
barring breakthroughs, or changes in U.S. or Soviet Union strategic weapons
doctrines, it is doubtful that the United States or the Soviet Union will
have weapons systems or force postures that would permit an adequate force
reduction salvo in this time period. Salvo disarming attacks, therefore,
are not considered logical alternatives for the years 1970-75 in U.S.-
Soviet confrontations. However, a slow-motion counterforce war and some
degree of counterforce salvo as well as slow-motion countervalue wars
will be technically feasible. We will discuss these below.

Some comments on the entries on the tables are probably in order.
Starting with U.S.S.R. objectives, the Devastation Attack is, of course,
designed to destroy civilians. As already discussed, the Environmental
Attack attempts, by using something much like an area attack, to destroy
capability by unexpected weapons effects or by exploiting certain weak-
nesses in design. Because such possibilities exist, it would hardly
surprise a sophisticated observer if even a seemingly well-designed and
well-manned system failed because of mechanical or human lapses. The
other options have all been more or less discussed.

The three Exemplary attacks on the tables, Exemplary Plus, Exemplary
Equal and Exemplary Minus, indicate that we could make some kind of re-
taliatory response which could be in some sense greater, equal to, or less
violent than the provocation.

In most instances the responses considered are self-explanatory;
the reason for escalating could be a simple belief that quick escalation
in reprisal to a provocation is the way to force an opponent to back down.
Sometimes, though, the responses will be below the diagonal, because the
devastating effects of weapons and the risks of eruption are now so im-
portant that prudent (and even imprudent) decision-makers may find them-
selves forced into very cautious policies. If a successful disarming
attack were possible, however, even a prudent man might choose such a
course--but if it were not available, the same man might try some act
of de-escalation (Exemplary Minus, Declaration of War, etc.) to signal
the enemy that while one does not intend to capitulate, compromise is
possible.[11]

We indicate in the tables that a Devastation Attack could follow an
Augmented Disarming Attack; that is, a disarming of the Soviets could be
followed by an attempt to punish them. This is controversial; some think
we should restrict ourselves to life-sparing disarming attacks because of
moral and political considerations. In any case, in the later time period,
we are likely to move down to the Exemplary Plus or Exemplary Equal attacks
because Disarming Attacks may be less feasible, at least under current pro-
grams and estimates. Of course, a chart for a U.S.-Chinese confrontation,
or Soviet-European confrontations, when even in the later time period the
balance of power may be asymmetric, could include disarming attacks that
might be useful and feasible.

In Table III, the possible U.S. responses to a Soviet Exemplary Attack
are considered as threats for which the U.S.S.R. must choose counterthreats.
Obviously, if one considered still further reactions, and reactions to re-
actions, these matrices would become an unintelligible cross-hatch of
numbers.

Complicated as the analysis of this "tit-for-tat" exchange is, how-
ever, it obviously does not reflect real environments of "an outbreak"
and/or "war-fighting," if only because it is a two-sided _military_ analysis.
In addition, we have noted, the Decade may see the entrance of other na-
tions into the nuclear club, and it is at least conceivable that a three-
or four-contestant war could occur with A striking B, B and C retaliating,
bringing in D who strikes B and C in conjunction with A. And while the
great powers will probably then have weapons which are hardened, mobile,
and accurate, the Nth countries may not. Therefore, a given strategy
(e.g., counterforce) may be applied to an Nth country but not to a great
nuclear power; and an Nth country's ability to respond in kind may be
limited because of bad CEP's, antiquated "dirty" bombs, etc. Thus, the
situation could intensify "horizontally" by bringing in other parties,
possibly requiring two different strategies simultaneously, i.e., coun-
terforce against an Nth country, with a "show of force" to keep out its
"sponsor." But there is also a danger that the level of violence may

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[11]Of course, the signal may be used to buy time to mobilize, to
evacuate, or to make other decisions.

TABLE III

U.S.S.R. RESPONSE (1963-1967) TO U.S. RESPONSE TO U.S.S.R. EXEMPLARY ATTACK

U.S.S.R. Counterthreat \ U.S. Threat	1. Augmented Disarming	2. Unmodified Disarming	3. Restrained Disarming	4. Declaration of War	5. Exemplary Plus	6. Exemplary Equal	7. Exemplary Minus	8. Demonstration	9. Show of Force or Demonstration	10. Local Nuclear War--Military	11. Local Nuclear War--Exemplary	12. Conventional Capabilities	13. Nonviolent
1. Devastation Attack		?											
2. Environmental Counterforce		?											
3. Augmented Disarming		?											
4. Unmodified Disarming		✓	?		?								
5. Restrained Disarming			✓	?	✓	?	?						
6. Exemplary Attack				?	?	✓	✓						
7. Show of Force or Demonstration				?			?						
8. Local Nuclear War--Military													
9. Local Nuclear War--Exemplary													
10. Non-Nuclear Extreme Provocation				?									

increase drastically, if only because the Nth country may not be capable
of fighting a "slow-motion" (see below) war. Matrices for Nth countries
can be developed, and United States-Soviet matrices of greater detail and
complexity may include such Nth country factors and still not be too com-
plicated for easy use. Despite their drawbacks, however, the considera-
tion of two-dimensional matrices covering the two present major contestants
can be helpful.

Central War Problems

Many of the strategies of central war are bizarre and highly improb-
able. Yet the ones we will now consider may represent, in some important
and not impossible conditions, reasonable alternatives to even more improb-
able and less desirable options. As we have remarked, the skeptical must
suspend their disbelief to enter into such an intellectual exercise as
this, and be willing, temporarily, to assume the reasoning which might
support a nation's decision to enter a nuclear war. But the greatest
caution must be used in relating such "bloodless" abstract Level Five
analysis as this to the demands and possibilities of the real world.

In considering abstract idealized war, it is convenient to concen-
trate initially on six classes of tactics: (1) spasm attack; (2) a coun-
terforce salvo; (3) a slow-motion counterforce war; (4) a slow-motion
countervalue war; (5) a countervalue salvo; and (6) symbolic (communica-
tion) attacks. Such tactics might be considered as possibly occurring
in the following sequence: a war starts with counterforce salvos, fol-
lowed by slow-motion counterforce exchanges, which are themselves followed
or accompanied by a slow-motion countervalue war, while always in the back-
ground is the possibility of escalation to countervalue salvos or, in an
extremity, to a spasm attack.[12]

In trying to understand the interplay among these tactics, one must
first understand the slow-motion countervalue war. In its simplest and
starkest form, this could take the form of the second P-Q model in which
each side threatened to blow up, or actually did blow up, a city a day
belonging to the other side until: (1) one side or the other backed down;
(2) the exchange erupted to a higher level of destruction including spasm
war (i.e., all-out countervalue salvos); or (3) both sides ran out of
cities. It is clear that such a 'War of Resolve" could be very destruc-
tive and both sides might be anxious to postpone or avoid such a stage of
hostilities. Thus, this kind of war would tend to be the final stage of
"rational" or "controlled" escalation; or during the course of any form
of slow-motion war there could be a series of such exchanges at various
levels or in connection with various incidents, in which one side or the
other briefly probed the other's resolution.

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[12]The perceptive reader will note that the above and what follows
seem to fit in somewhat better with the U.S. escalation ladder given on
pages 22-23 than the Soviet escalation ladder given on page 154.

If both sides have equal numbers of missiles in this "War of Resolve," each presumably is simply testing his resolution against his enemy's-- i.e., they are measuring psychological, ideological, and political asymmetries. If there is inequality in numbers of missiles the significance of this inequality will depend, among other things, on the level of destruction achieved when the weaker side runs out of missiles and on the previously mentioned "soft" asymmetries. In order to illustrate how this might vary, let us consider an extension of some of the simple P-Q models considered in Chapter IV of Crises and Arms Control. As in that report, we will assume that there are two sides, P and Q, and that both sides have 100 equal-sized cities (it would be too complicated for our purposes to assume variable cities), and that one missile can destroy a city with 100 per cent reliability. Consider now the situation when Q has 100 invulnerable missiles and P has 1,000 such missiles. Since Q has 100 cities, 900 of P's missiles are useless--they can only overkill. It is clear that if the two sides engage only in a "War of Resolve" of the one-city-a-day sort, then neither P nor Q has any military advantage. (Yet P will probably enjoy some increased assurance from its 900 "useless" missiles, and Q will lose some assurance because of its inferiority--particularly if neither is governed or populated entirely by professional mathematicians or operations researchers. This asymmetry in assurance could be advantageous to P.)

Now let us drop Q's missile inventory to 50. P has some advantage now, but at the one-city-a-day rate of attrition it is almost inconceivable that the process can continue until 50 cities are destroyed without eruption or without settlement. This does not mean, however, that P's advantage will not function. Should the exchange erupt, P loses only half his people. Both sides know that in a desperate extremity P has an advantage over Q; and P presumably will insist upon a reward for his advantage. This does not mean that P will win any victory; it means simply that P should come out relatively better in a settlement than he would have had he not possessed the extra missiles. In this case, how the two sides actually come out may depend on their resolve and on the negotiating context.

Let us now give Q only 10 missiles. P can suffer 20 million dead if Q runs through his 10 missiles. While this is a very stark prospect, it is within the "conceivable." P can now run risks and may choose to do so. If he does, he can probably persuade Q to back down or compromise to some significantly greater extent than if Q did not have this strategic inferiority. Yet one also suspects that if P is essentially a status quo power, and Q is a revisionist or revolutionary power--that is, one not subject to major political restraints--Q may be able to be quite aggressive in his case against P. Indeed, if Q only had something between 1-5 missiles, deterrence would still be a two-way street--and Q might press P quite hard in major matters. But both would nevertheless know that if it came to a final test Q must back down or suffer a disastrous and total defeat, while P would suffer enormous, but still limited, destruction. This knowledge should considerably increase P's assurance, even in low-level crises, and correspondingly weaken Q's assurance.

Let us consider some additional numerical examples in the simple P-Q model form where each side has 100 cities. Assume that P has 256 missiles and Q has 128, but now also assume that the missiles are vulnerable so that each has a kill probability of one-half. If P launched all 256 missiles at Q's 128, he would assign two missiles to each one of Q's missiles. This would mean that there would be one chance in four that neither of the missiles assigned to a target would destroy Q's missile. And this would mean that after his attack P would have zero missiles left and Q would have 32. P has foolishly disarmed himself.

P could use other tactics. He could launch 128 missiles at Q and expect to reduce Q's missiles to 64, being left with 128 missiles himself. P is clearly not losing anything by doing this, because he still has an overkill capability, and at worst he has saved 36 of his (smaller?) cities since Q now only has 64 missiles left. Since P has 28 more missiles than city targets, he could actually have launched 156 missiles in his first strike, assigning two missiles to 28 of Q's missiles, and one missile to the remaining 100. This would mean that on the average Q would have 57 missiles surviving. (One-fourth of the 28, and one-half of the 100, should survive.) However, if P fires at 43 of Q's missiles with one missile each, and at 85 with two missiles each, then P will have 43 missiles left and, on the average, Q would have 43 missiles left, so they would be exactly even. Thus, if P withholds less than 43 missiles, Q may expect to have a greater number of missiles left than P. And if P withholds more than 43 missiles and less than 100, then Q will have less than P and less than 57, but the difference between P's and Q's forces will be less than when P withheld 100 missiles. These simple numerical results are illustrated in the following graph.

FIGURE I

Q Passive

Each of P's missiles has kill probability 1/2.
P's threat against Q, with P assigning two missiles per target in a single counterforce salvo.

P's Operating Zone

Q's Threat Against P's Cities

P's Threat Against Q's Cities
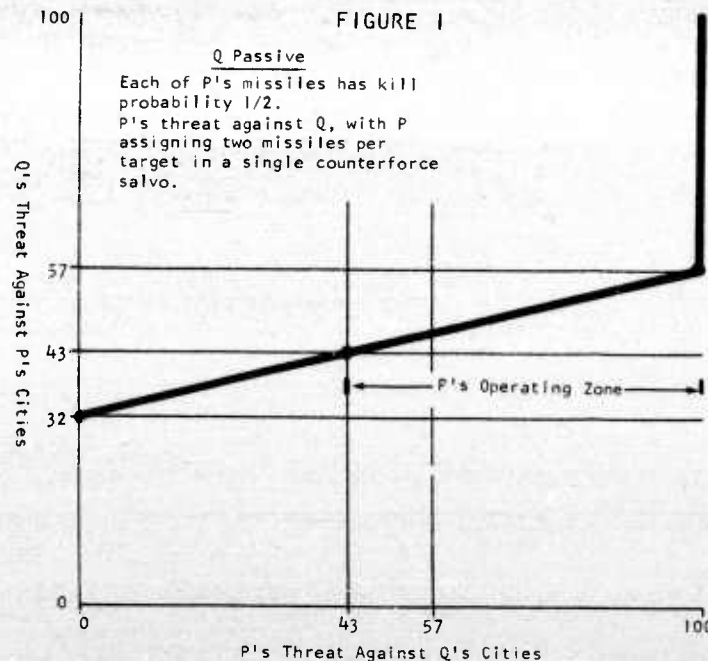
What now is P's best strategy on his first strike? One would con-
jecture that P should maintain to the end his "complete" kill capability
and therefore withhold 100 missiles and launch 156 missiles. This will
give Q a total of 57 missiles on the average. This maximizes both the
ratio of P's threat to Q's threat and the difference between the two
threats, and it somehow tends to increase P's bargaining power. But it
also leaves the danger very high--that is, if worse comes to worst, P
will lose 57 cities. However, it would seem clear that P should not
desire to end with fewer missiles than Q. If he launches more than 213
missiles he will end with fewer, and in fact we have pointed out that if
he launches 213, both parties have the same number of surviving missiles--
43. Therefore P should launch between 156 to 213 missiles, but probably
nearer to 156 than to 213.

If P has perfect (or good) reconnaissance and can tell exactly which
of Q's missiles survives, he has another possible strategy. He can start
off by launching 128 missiles. This, on the average, would knock Q down
to 64. If Q does not fire, P can then launch 64 missiles and cut Q down
to 32, on the average, and as the following table indicates, with success-
ive strikes (with Q remaining passive), P can end with two missiles and Q
with one.

TABLE IV

Q PASSIVE

Strike	P Number of Missiles	Threat (cities)	Q Number of Missiles	Threat (cities)
0	256	100	128	100
1	128	100	64	64
2	64	64	32	32
3	32	32	16	16
4	16	16	8	8
5	8	8	4	4
6	4	4	2	2
7	2	2	1	1

P has in a series of strikes succeeded in disarming both sides, pre-
sumably deterring Q from hitting P's cities by threats of counter-reprisal.
And as P did not have a serious disarming threat, Q presumably was not
anxious to go to a city-trading war. Of course, P could have stopped at
any particular strike. At any point he has twice the threat that Q has,
and if the disparity is what counts, he probably looks most impressive on
the second, third, or fourth strike.

This table illustrates some of the advantages of slow-motion con-
trolled counterforce war in the somewhat artificial case of Q's remaining
passive and P's possessing very good reconnaissance. This slow-motion war
should be compared with the single counterforce salvos previously con-
sidered.[13] The largest of those strikes began with an all-out counterforce
war (or spasm war) in which P, on his first strike, launched all 256 of
his missiles and placed two missiles on each of Q's 128 targets. Q was
left with 32 missiles while P had completely disarmed himself. Then we
looked at smaller strikes in which P's missiles were used inefficiently
(in that, theoretically, each missile killed only one-half a target and
a follow-on missile was presumed to have killed the remaining half of
the target). The table above illustrated a possibly more efficient use
of P's missiles, increasing efficiency by P's good postattack reconnais-
sance and a different targeting procedure. P, on his first strike,
launched 128 missiles, placing one missile only on each one of Q's 128
targets. Since each of P's missiles kills, on the average, only one-half
target, this first strike would kill, on the average, 64 of Q's missiles.
With P's perfect reconnaissance he could note which of Q's 64 missiles
were left, and launch 64 missiles, again placing one missile on each of
Q's 64 remaining targets. As before, on the average, one-half of these
64 targets were destroyed. The same procedure is repeated, and the se-
quence of strikes eventually leaves P with two missiles and Q with one.

In Figure II we have drawn on a single chart each side's threat against
each other's cities for the two different types of targeting procedure. The
solid line describes the threat against cities for different magnitudes of
single counterforce salvos. The dotted line describes P's threat against
Q's cities when P uses the sequential targeting procedure described above.
Several features of this chart should be noted. First, let us suppose
that P, after his first strike, wants to have enough missiles left to be
capable of threatening all 100 of Q's cities. As the analysis above has
shown, P will assign 156 missiles to all 128 of Q's missiles in such a

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[13]Note that if a TAPS (Target Accuracy Prediction System) system is
used instead of reconnaissance the strikes need only be a few minutes
apart.

FIGURE II
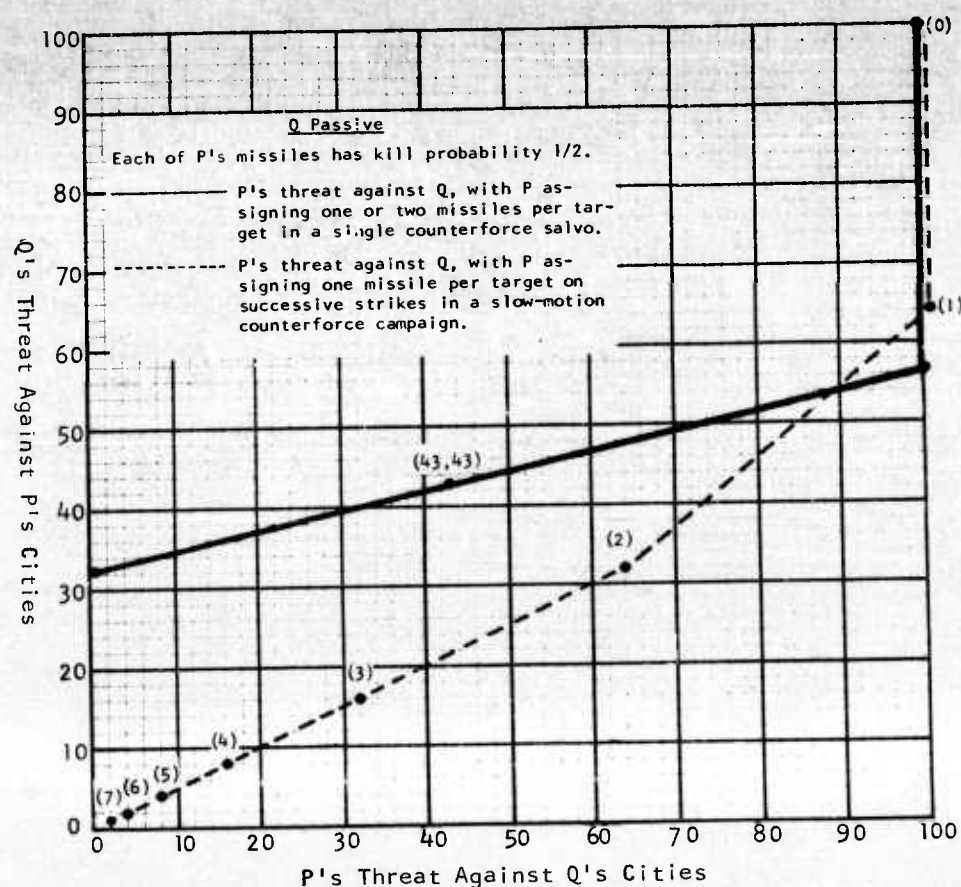
way that Q will be reduced to 57 missiles as a residual force--and this
is the best result that P can expect if he insists on keeping a 100-mis-
sile threat to Q's cities. Next, if one looks at any particular point
along the abscissa (i.e., P's threat against Q's cities), and then sub-
tracts the value of the dotted line from the value of the solid line at
this particular point, a number is obtained which represents the disad-
vantage in P's threat against Q in a single counterforce salvo as com-
pared with a slow-motion counterforce campaign. Clearly, over a small
region of the curves (i.e., between the first and second strikes with a
salvo of less than 167 missiles), the counterforce salvo leaves Q with
an equal or a smaller threat than does the slow-motion campaign, while
after the second strike the slow-motion campaign leaves P with a greater
relative threat than would have resulted from any single salvo.

Let us consider a final abstract case. Let us assume that P has 200 missiles and Q has 100, and that one missile takes out one missile, but that only one missile a day can be fired. It clearly does not pay Q to shoot at P's missiles, but it equally clearly does pay P to fire at Q's missiles (at least in terms of the calculations). In one possible campaign, P could shoot a missile a day, every day until, at the hundredth day, Q had no missiles left. Q, of course, would recognize that he was being disarmed and at some point would have to stop P's campaign. That is, each day the ratio of threats would get worse for Q; although the difference between the number of P's and Q's missiles would not change. He could threaten to launch a countervalue salvo--large or small. Or he could, if he wished, destroy a city a day (probably having to accept a city-a-day destruction in return), in which case, after 50 days, he would have run out of his missiles and both sides would have lost 50 cities. Note that in this case it is to the weaker side's advantage (calculationally) to speed up the exchange. P would then be the "winner"--but might regret his 50 destroyed cities. If Q did not find the one-city-a-day threat effective, he might increase his threat to two, or three, cities attacked a day, in which case after 33, or 25, days he would have run out of missiles and both sides would have lost two-thirds, or three-quarters, rather than one-half, of their cities. There is little that can be said about the optimum strategy for Q. He will have to work out strategies that address the psychology and political interests of his opponent.

Assume now that P can launch 80 missiles in his first force reduction salvo, but from that point on he can only fire one missile a day. In the real world this might correspond to a situation in which P had 80 per cent intelligence but had to search for 20 per cent of the opponent's missiles. In his first force reduction salvo, P would reduce Q to only 20 missiles. But Q still poses a formidable threat: he can kill forty million of P's population. Yet at this point his threat is perhaps low enough so that in this bizarre world P could conceive of accepting such punishment. Q is now in serious difficulties. If he launches all 20 missiles, he will hurt P severely, but P will still survive and can annihilate Q. If P now tries a slow-motion counterforce war, firing one missile a day, and Q tries some sort of slow-motion countervalue war, say one city per day, then in ten days Q will have been disarmed and P will have lost ten cities and 20 million people. But Q will have been eliminated as an immediate threat. If Q tries a higher rate of attacks, he is likely to aggravate P even more. The best strategy for Q might be to start with city-a-day attacks, and after the second or third day point out to P that he is going to lose another six or seven cities and suggest negotiations to save those cities. Or it might make sense for Q to begin negotiating immediately while threatening an all-out countervalue salvo should P start a slow-motion counterforce campaign. If P ignores this threat he risks 20 cities in order to destroy one Q missile. However, if P is to disarm Q he must take this chance. Presumably, whether or not P should start or continue a counterforce campaign ought to depend on how much better he believes the "peace treaty" he can get after Q is disarmed would be than the peace treaty he can get while Q has a 20-missile threat. If an agreement is reached, Q undoubtedly would insist on keeping any missiles he has left to insure enforcement of the agreement.

Let us consider another case in which P can effectively launch only 20 missiles in his force reduction salvo. He might think it a good idea to destroy 20 of Q's missiles immediately and then begin a slow-motion, one-missile-destroyed-per-day war. However, he might also be willing to forego the initial force-reduction salvo on the grounds that Q would reply with a one-city-a-day, or worse, campaign before the slow-motion counterforce campaign has gone very far. Although if a slow-motion countervalue campaign should be carried through to the end at the rate of one city a day, P would lose 40 cities with the salvo and 50 without the salvo; Q could eliminate this difference by speeding up the rate of city-trading. Thus P would have won no great advantage from his force reduction salvo. He may indeed have lost, since by starting with a salvo he risks confusing Q, and Q may not realize that Q's best strategy is a slow-motion war. Indeed, in the confusion and fright Q might salvo and P would lose 80 cities. In order to make starkly clear the "new" nature of the war, it thus might make sense for P to begin with a slow-motion counterforce war and accept the narrow military disadvantage of not salvoing. In fact it might even make some sense for P not to destroy any of Q's missiles; after all, Q can always reduce the advantage of P's slow-motion counterforce by speeding up city-trading. So P might confine himself to a slow-motion countervalue war.

There are some who have studied this problem who have concluded that fighting a war with an initial force-reduction salvo, or even with any counterforce attack at all, is likely to introduce "noise" whose cost in confusion, fear, and anger may be unacceptably high. They feel that under a large range of circumstances, if one wished to conduct a slow-motion countervalue war one should start with precisely that kind of war in order to minimize misunderstanding. Many believe that the simplicity of a pure reprisal war, as opposed to the more complicated force-reduction salvo-- which is followed by slow-motion countervalue--is such that its concepts can be "put across" more easily than those of the second kind of war. Of course, if the advantage to be gained in the initial force-reduction salvo is very great, it is likely to be the best policy. So long as bombers are a large portion of each side's forces, this is likely to be the case.

Clearly we could go through cases indefinitely and we could mix in a certain number of city exchanges as we consider counterforce campaigns, but it should be clear at this point that it is impossible to assign any exact rules or doctrines. It only may be possible to indicate limits-- to indicate what one should not do--as, in our example, we discovered that if P were going to fire only a single salvo, it should not be 256 missiles. And there is a circumstance in which a slow-motion war might be a realistic model. It is clear that if a side strikes first and can actually reduce the force of the defender before the defender can make a really total threat, or a serious approximation to such a threat, and if at the same time the side striking first is able to withhold enough missiles to continue to pose a much greater threat than the defender, then it could hope to control the situation. It might, through a judicious combination of threats and promises, disarm the defender with a relatively

small loss of cities. But even these are mathematical calculations of advantage, and as such, only a single factor in the decisions of great complexity and unprecedented consequences to be considered at the higher levels of analysis. The numerical results just presented illustrate a very simple sequence of events which we might describe as a controlled war. These "simple" results, however, are not suited for discussion of the final or terminal phases of such a war. We will not go into any further discussion of such simple models. In Chapter XI we will outline in a qualitative way some more of the factors which could be important in the waging and termination of a controlled war, and some formats for integrating Level Four and Level Five analyses.

CHAPTER X

THE FIRST THREE LEVELS OF ANALYSIS--THE NATIONAL GOALS

Introduction

Despite the title of this chapter, it well may seem more reasonable
to look upon the national goals as a single level of analysis. The reason
we have divided the analysis into three levels is not that we have here
the same hierarchy of means and ends that we have for the other four levels
(or five, if we consider the national goals as a single level), but because
the motivations of various participants are so different; it seems to in-
troduce clarity to discuss national goals in the three categories of:
Beyond the National Interest, The National Interest and Beyond, and The
National Interest, a typology of motivations rather than of means-ends.
On page 41 we defined these three levels as follows:

1. Beyond the National Interest: Ideals, objectives, and hopes we
    hold, beyond our national interests narrowly defined, for various
    other human communities and for mankind as a whole.

2. The National Interest and Beyond: Enlightened self-interest as
    an intimate mixture of considerations of the national interest
    and those which lie beyond the national interest.

3. The National Interest: Measured by the well-being and security
    (narrowly defined) of the people of the United States.

In order to make the distinctions clearer we will use the example of the
Doomsday Machine.[1] At first sight, one could imagine that people would
be against Doomsday Machines simply because they might be used: such
would result in the obliteration of the United States, a notable conflict

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[1] A Doomsday Machine is defined as a device or system which can be
automatically actuated in the event of a series of precisely determined
contingencies (such as five bombs dropping on the United States, a Soviet
invasion of Europe, a North Korean invasion of South Korea, and so on)
and which, if actuated, will destroy all human life. It seems quite prob-
able that such devices can be built at a cost of something between $10 and
$100 billion, most likely closer to the lower figure. See pages 145 to
152 of On Thermonuclear War for a discussion of this hypothetical possi-
bility. In particular, it is explained there that if one has only the
following five requirements for a deterrent weapon system, that it be:
1) terrifying, 2) inexorable, 3) persuasive, 4) inexpensive, and 5) fool-
proof, that the Doomsday weapon system seems to fulfill all the above
requirements better than any other weapon system.
    One purpose in discussing a Doomsday Machine is to make clear that
maximizing deterrence is not a useful guideline for designing weapons sys-
tems by itself. Indeed if one uses this principle alone, one ends up with
Doomsday Machines--which alone causes one to examine the list critically
and add, at least, a sixth requirement, controllability.

with the U.S. national goals at Level Three (security and well-being).
But people also object to Doomsday Machines because of larger consider-
ations, because of what are in fact ethical or moral motivations that
are seen as outweighing narrow national interests. For example, if one
asks Americans to choose between the hypothetical choices indicated in
the table below, one finds that overwhelmingly they choose weapon system
X over the Doomsday Machine. Yet there is no argument rising out of a
narrow consideration of U.S. national well-being and physical security
that could justify such a choice.

How Would the American President Choose?

	PROBABILITY OF DETERRENCE FAILING IN THE DECADE	CONSEQUENCES IF DETERRENCE FAILS
WEAPON SYSTEM X	.10	100% of U.S. & S.U. population
DOOMSDAY MACHINES	.05	Humanity

The Doomsday Machine is an ultimate, and most people treat it as
such. That is, instead of applying the usual "morality of consequences"
which is common among U.S. decision-makers, they simply draw a line. One
can gain an insight into what occurs here by considering at which point
various people draw their lines. The next table poses this problem.

Where Do You Draw the Line?

antibiotics
using insecticides (Jains)
eating meat (vegetarians)
any violence (religious pacifists)
high explosive wars (World War I pacifists)
kiloton (nuclear pacifists)
megaton (many strategists)
gigaton (U.S. decision-makers)
doomsday machines (almost everybody else)
galaxy-destroying machines (3 people)
universe-destroying machines (X)

The table suggests that to some extent we are all unilateral dis-
armers; that is, there are things that we will not do, no matter what the
national interest seems to require. For example, the Jain community in
India will not use insecticides even though they are a poor people (but
one rather suspects that they would use antibiotics, though we do not know

this for certain). A very common dividing line was created in the trenches
of World War I. Pre-World War I, one could find many perfectly respectable
speakers at high-school commencements and the like arguing that war is a
good thing. It brings forth the finest qualities of mankind: courage,
altruism, self-sacrifice, patriotism, comradeship, skill, endurance, etc.
But after the experience of trench warfare in the first World War, it was
difficult to find any reasonable person in the West who still held such an
attitude. Even in Germany and Italy the attempts to exalt military virtues
never really caught on with the people. Thus, as a result of World War I,
many people in the inter-war period contended that high explosives no longer
provided a reasonable way to settle disputes; that anything was better than
war. Many people still take this position. Others now draw the line at
using nuclear weapons. Still others draw the line only at using multi-
megaton weapons. Another line was drawn by the U.S. decision-makers who
decided in 1957 not to test a 60-megaton bomb. That decision remains un-
changed even though the Soviets have tested such a bomb. Finally, almost
everybody draws a line at Doomsday Machines. The editor has, however,
found at least three people who would not draw the line here but would, on
being pressed, draw the line at galaxy-destroying machines (there are about
100 billion stars in the galaxy). He has actually found one individual who
said if he judged it improved the national security of the United States,
he would, in fact, build a machine that would entail the loss of the galaxy
if things went badly. But even this individual drew the line at universe-
destroying machines (there are about one to a hundred million galaxies in
the universe). Even as a joke, he could not maintain that just to settle
a quarrel in the northern hemisphere of the earth he was willing to risk
the universe. While the above has its humorous (and tragic) aspects, it
does reveal an extremely important aspect of any U.S. national policy.
There are limits, and it is important for us not only to observe these
limits but to make it clear that we are observing these limits.

It is not always clear whether these limits are held as moral judg-
ments (a sort of manifest function) or whether they are really based on
what we will call "systems bargaining" (a sort of latent function) whose
justification lies in a complicated or societal cost-benefit calculation.

There are other graphic ways of putting the argument. Imagine a wil-
derness area which has a reasonably plentiful supply of game and other
sustenance. If there are about 1/10 persons per square mile it is possible
to get along quite well without a "zoning ordinance." The same is probably
true at one person per square mile, though things might go better if people
demonstrated some care for their neighbors' well-being. At about 10 people
per square mile, most public-spirited people will recognize the need for
zoning ordinances while others sincerely may not. (However, some people
will die because of this sincerity.) At 50 to 100 people per square mile,
one either has zoning ordinances or the population will decrease sharply;
there is no alternative.

Or, to take the most extreme example, imagine that Doomsday Machines
were made to cost about $100 and could be manufactured out of widely avail-
able materials. Once this information became widely available there likely
would be only one possible prediction about the earth's future. If the
cost were raised to $10,000, the situation would be less stark, but the

alternative to world destruction would probably be the very strict control
of the existence or design of the machines. One could imagine a world-
wide authoritarian state in which knowledge of physics and engineering
was monopolized by a few. The prognosis would still be bad, but presum-
ably not as bad as in an uncontrolled situation. The situation is not
changed much if the cost is made $10,000,000. However, at $10,000,000,000
per machine, something like the present state of affairs may be expected
to continue for some time; one may not need a world-wide authoritarian-
ism. The dime-store Doomsday Machine is not a likely possibility, but
as President Kennedy said in his U.N. speech of September 23, 1961:

> The events and decisions of the next ten months may
> well decide the fate of man for the next ten thousand
> years. There will be no avoiding these events. There
> will be no appeal from these decisions. And we in this
> hall shall be remembered either as part of the generation
> that turned this planet into a flaming funeral pyre or the
> generation that met its vow "to save succeeding generations
> from the scourge of war."

Social Order vs. Social Justice

The above discussion is an example of a basic controversy that has
consumed civilized man for the last 6,000 years or so. This controversy
revolves around the question, "What are the basic guiding principles that
should determine society?" We list below five common sets of guiding
principles:

Liberty	Equality	Liberty	Order	Order
Equality	Fraternity	Pluralism	Efficiency	Hierarchy
Fraternity	"Classless"	Diversity	Hierarchy	Exploitation
	Monolithicity	"Class"	Security	Perhaps Security

Social Justice

Social Order

From the times of the Greeks until the enlightenment of the 18th
century one could, one judges, fairly say that social order almost in-
variably tended to be emphasized over social justice. Since the enlight-
enment, the contrary has been true. However, it seems quite plausible
that in the second half of the twentieth century there will be at least
some small shift back towards social order. The requirements of both
economic development and arms control seem to indicate the need for such
a shift. For example, we may see reinstated some form of the law of
reprisal as it existed in the 18th and 19th centuries. Under this inter-
national rule any nation that felt it had been injured by another nation
could inflict on that nation physical harm, perhaps by sending gunboats
up the river to bomb the capital city. If neither nation chose to take
this act as an act of war, then in fact there was no war. The result
was, of course, that the small nation would not choose to interpret it

so because it would lose the war; the large nation did not wish to so
interpret it because it wished to make the punishing act a minor matter
rather than a major matter. One result was that large nations were able,
to some degree, to regulate the behavior of small nations in a way which
today is no longer possible. For example, the peaceful blockade of Cuba
by the United States was, by the standards of the mid-twentieth century,
very close to an illegal act and an unwarranted interference with Cuban
sovereignty, but the new conditions created by modern technology made
such an intervention by the United States almost mandatory. Or consider
the intervention of the United Nations in the Congo. This illustrates
quite well the complexity and difficulties that surround the concept of
self determination and sovereignty. The intervention could be considered
as an act to suppress Katangese national interests in favor of the inter-
of the Congo as a whole, or in the interests of the new nations (whose
only claim to their borders is, in many cases, as the heir to the former
colonial power). According to one's viewpoint this might be an example
of the ascendency of national sovereignty over "states' rights" or else
a weakening of the notion of self determination and unrestricted national
sovereignty.

By the end of the twentieth century conflicts of this nature are
likely to be common. The ideas of nationalism and of the self-determi-
nation of nations and peoples which have played such an impcrtant role
in the last fifty years may have, in some sense, reached their peak;
they are, one judges, beginning to lose their force despite their seeming
success everywhere. These ideas express the ideal of justice formulated
as equality among nations, each nation entitled to the sovereign inter-
pretation and expression of its own aspirations. By the end of the twen-
tieth century, this formulation of the ideal of justice is likely to have
been replaced or modified by others that express the need for security,
arms control, and order. The changes assert themselves in the interest
both of regulating aberrant behavior (Cuba) and of facilitating more
effective cooperation among nations with common interests (EEC). There
will be a desire to structure situations so that the actions of more than
a hundred sovereign nations can be controlled to some extent and there
probably will be an attempt to make it possible for a much smaller number
of more responsible decision-makers to make more of the important decisions.

Until about the eighteenth century, order tended to be a more imme-
diate concern of political society than the issues which, since the
Enlightenment, have seemed to us the primary issues--justice. Hierarchi-
cal societies and hierarchical types of international order were more
common than today. Now national sovereignty and forms of individual
equality or egalitarianism (e.g., one man, one vote) have come to be ac-
cepted as norms almost anywhere--norms not yet realized everywhere, but,
in the eyes of most people, norms that must come into their own as soon
as "artificial" barriers and conditions can be removed; indeed, with the
possible exception of a few regions of Europe, nationalism prevails in a
very strong form everywhere today.

But change could happen through violence, and a growing appreciation
of this possibility may greatly influence the Debate. Or violence might

be all but eliminated--at least violence with strategic forces. Strategic forces may play a smaller role in developments at the end of the twentieth century than they have in the past, partly because their very effectiveness for some purposes may cause them to be harnessed so tightly that they are ineffective for most purposes. In any case, the major impact these speculations have on this study is that they suggest an enhanced emphasis on arms control and other measures which depend less upon voluntary assent by the smaller countries and by other less powerful groups. Because of an assumed greater emphasis on order than on justice as we formulate it today, there is likely to be some change in emphasis in the national goals. For example, to the extent that the goals of order and justice conflict, we are probably going to be as interested in "making the world safe for the U.S." as in "making the world safe for democracy." Fortunately, the two goals seem to reinforce each other. There may be somewhat greater emphasis on economic, political and legal security and progress, and therefore somewhat less on liberty, equality, and a pluralistic fraternity, and perhaps even less on dignity, truth, and justice. This does not mean that we are willing to compromise democratic values and goals to a great extent; it means only what was said: there might develop a greater emphasis on order and security. One can now find people emphasize either Level One or Level Three on both sides of the order vs. justice question. For this reason we will tend to assign order vs. justice questions to Level Two.

The whole idea has been put very dramatically by Nietzsche as follows:

> Inescapably, hesitatingly, terrible like fate, the great task and question approaches: How should the earth as a whole be administered? To what end should man--no longer a people or a race--be raiseddand bred?

It should be noted that Nietzsche is not saying: "All men of good will should get together in order to form a new life for everybody," but rather, "All men whether of good or evil intent must concern themselves with this problem." The quote from von Neumann on page 94 illustrates an attitude which is very close to Nietzsche's. According to von Neumann we are running out of geographical and political <u>lebensraum</u>. We no longer have the safety factor of geographical space. It is no longer possible to accommodate major tensions created by technological progress by simply expanding the spatial areas under dispute.

Kennedy, Nietzsche, and von Neumann may or may not have been expressing accurate judgments of current reality, and of our current choices, but one must take seriously the possibility that one or more of them are, both because they may in fact be right, and because others, whose support and morale are important, may believe that such statements express current reality.

But how are limits or ordering principles discovered or estab-
lished? We will comment on factors that already provide limitations or
restraints of one or another kind upon American policy, or that influence
those policies in directions that depart from, or even contradict, the
strict national concern with security, survival, or national advantage.
We have defined these as of three general types. First, those which are
"beyond the national interest."

Level One: Beyond the National Interest

The attitudes of most Americans towards Central War (and even towards
war itself) are influenced in some degree by one or more of the following
"goals" or "values," none of which are necessary, identical, or even
wholly consistent with the "selfish" national interest (i.e., as consid-
ered at Level Three).

1. A belief that America has a mission to combat evil in the world
and to do good. Traditionally this was to be done by example, but today
many Americans believe in active intervention, even at some risk to the
narrow national interest or to national security.

2. A belief that force and violence are not proper tools to use
except for self-defense or in a "just crusade," and a resulting bad con-
science about American policies that involve the use, or the threat, of
war or violence to advance the national interest.

3. A commitment to traditional cultural values of justice, altruism,
legality; a commitment to codes of chivalric behavior and "Geneva Conven-
tion" conduct in war; some general sense of fellowship with humans every-
where, whatever the form of government under which they live.

4. A consciousness of obligation towards allies and of a responsi-
bility to protect both them and nonallied states which may be threatened
by America's enemies. (This impulse derives in part, of course, from the
acknowledgment of treaty obligations, but it also stems from a more general
sense of moral obligation to the world community that is related to the
earlier motivations on this list.)

5. A characteristic American conception of history as progressive
and teleological, expected to lead ultimately to a peaceful world, and
a consequent perception of war and violence as steps backwards in this
progressive movement.

6. Specific religious or ethical injunctions against violence or
war, or against specific acts of violence.

If one is sympathetic to any of the above values then he is probably
willing to consider them as being appropriate national goals for which
other interests or goals may legitimately have to be compromised or sacri-
ficed--at least to some degree. If one is not sympathetic to the values

expressed, he is likely to challenge putting the statement at Level One
or Two but suggest that the statement should be considered at Level Seven
as a characteristic, trait, or public attitude and one to be dealt with
in an expedient, political and manipulative fashion rather than respect-
fully and "sincerely." Expediency and politics may also demand that
compromises or sacrifices must be made, but now one regrets them more,
regarding the reason for the sacrifice as pure cost and not a compromise
between goals. In this chapter we will, except possibly for the first
statement, accept all of the above as legitimate Level One national goals,
though occasionally, we will also look at them from the expedient point
of view as though they were a Level Seven characteristic or trait.

The above is obviously an incomplete list of American national goals
that go beyond the national interest. But it does comprise many of the
factors in American opinion which might go under the name of goals that
are most directly concerned with Central War and nuclear military policy
and which inevitably influence the President and the Congress in formu-
lating national policy. In some cases this is so because the President
and Congress share these attitudes or impulses; in other cases it is be-
cause the beliefs are sufficiently influential among the public for it
to be proper or expedient for the government to respect them.

Consider a few of the implications of these attitudes. The first,
third and fifth of these national states of belief have strongly influenced
the development of contemporary American foreign and military policy and
the rejection of the isolationism of the prewar years. The first and sec-
ond have been particularly important in influencing American conduct in war,
and the development of the strategies that are followed today. The second
is responsible in part for the moral inhibition, or sense of bad conscience,
that is evident in some quarters of American (and not only American) public
opinion in confronting the problems of nuclear deterrence. Moreover, while
there has been a European tradition that war or violence can be a morally
licit instrument of national policy in a given situation, but that it is
subject to restraint or limitation in practice, Americans have tended to
believe that while war and violence may be immoral in themselves (an un-
qualifiedly pacifist conception of war), there nevertheless are times when
a nation cannot avoid waging war or using violence. The practical result
of this uneasily divided belief has been a tendency in national policy to
condemn all international violence and yet to wage relatively unrestrained
wars. Since all war is held to be immoral, Americans seem to believe, once
it becomes necessary to wage war, that no further moral discrimination is
possible or reasonable. Indeed, the opponent, having made violence neces-
sary, is frequently held to be criminal, immoral, or a dangerous lunatic.

But while this attitude tends to work against restraint and limitation
in the fighting of war, it also tends to inhibit the use of violence in
nonwar situations, and particularly violence which is, or seems, illegal,
or whose purpose is narrowly self-serving. This is included in our third
category. It is, for example, reasonable to presume that one reason the
United States did not give overt reinforcement to the Bay of Pigs invasion

was that there was a considerable sense, within both the government and
the public, of guilt and inhibition at the illegal invasion of a small
country. Reasonable arguments, or rationalizations, were available to
justify an invasion, but they proved to be inadequate to give the govern-
ment the assurance it needed to go through with the operation. In another
case of American intervention in the affairs of a small country, in Vietnam,
quite the opposite is true: American assurance is high because the legal
status of the American position is good, and the motivation for American
action is considerably wider (and is perceived by other countries to be
wider) than mere self-interest.

The third set of values on the list give rise to a whole host of
considerations (or derived values). Thus, if one accepts this statement,
then he is likely to accept also that one should try to:

1. Balance national GNP's to increase world-wide satisfaction
   (at least to some degree and at some rate).

2. Reduce racial, national, and cultural animosities.

3. Oppose Doomsday Machines.

4. Preserve "objectively: most valuable cultural and political
   values somewhere, regardless of national survival.

5. Preserve human lives, regardless of culture or nationality.

6. Not contaminate the world-wide environment.

7. Etc.

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.
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He might be willing to see:

1. All nuclear power centralized in one state that seems to be
   willing and able to control the arms race, or

2. A condominium able to do the same, or

3. An international world-order based on the
   (a) one man, one vote or
   (b) one country, one vote

   principle as the only salient solution to the voting problem.

4. Etc.

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All of the above might be pursued at some cost to the National
Interest. In particular any and all of the above could affect policies
that could in turn, affect deterrence. However, the major impact of the
third set of values is on the whole concept of nuclear deterrence--of
keeping relatively innocent people as hostages for their governments
behavior, and risking the death of additional millions of neutrals if
deterrence fails. Number three, if taken seriously, could be interpreted
as meaning that it is immoral to use nuclear weapons on cities under all
circumstances. While the editor would not agree, he believes it is im-
portant for the American people to be morally informed, morally sensitive
and morally hard (tough-minded). This state of caring about the moral
issues, understanding them, and then willing to live with them, will not
be attained if we let only those who believe in various kinds of uni-
lateral disarmament or accommodation to monopolize the discussion of
these issues. It is indeed, a monstrous thing to have missiles trained
on Soviet cities and to threaten fellow human beings--including young
children--and yet it may be an even more monstrous thing to remove those
missiles. As will be pointed out in the discussion of Just War Doctrine,
it can be an act of Christian love and charity to be prepared to fight
for the rights of yourselves and others, even if this does entail some
risk or degree of mass killing. The above is a harsh statement; but in
a harsh world, harsh statements are not always incorrect. If it is correct,
we must be willing to face up to it and its requirements. In a nuclear
age it may be more difficult than ever before to maintain the standards
required by justice, chivalry, or kindness to children. But so far as we
can, we should do so, even at some loss in our capabilities--so long as
the loss is not catastrophic. Even then, we should not deliberately, or
casually, or easily involve ourselves in the mass murder of innocents or
even in its threat. One must also recognize the possibility that uni-
lateral disarmament itself, may be more immoral than the threat of the u
use of nuclear weapons, even in situations where there is a large collat-
eral damage to civilians. The editor believes that Jews and Christians
who take literally the injunction to Love Thy Neighbor as Thyself can
still support nuclear weapons systems. Whether or not the above is
clearly true, the discussion of these issues must not be left to those
who have prejudged the issues. All sides have a right to be heard and
the responsibility to hear. We will discuss the above question again
when we discuss Just War Doctrine.

The next American attitude on our list, that of obligation towards
allies, raises still another kind of issue. Here there is a question posed
of the United States possibly jeopardizing its interests, and in some cir-
cumstances, its national existence, in order to support an ally, or even a
nonallied nation, which requires American protection. Although considera-
tions of national interest alone might prompt the United States to take a
stand against the humiliation or harm of an ally, a situation could easily
be imagined in which the additional cost of going to war or even gravely
risking war would be so great that America's selfish interest would be to
renege. President de Gaulle of France has voiced many doubts about the
reasonableness of the United States' risking annihilation to come to the

aid of its allies. While it is impossible to predict what decision an
American President might make in such circumstances, it is certain that
he would have to take into account that a large number of Americans be-
lieve that the national interest should not be the only consideration in
honoring contractual or fraternal obligations. Indeed, this feeling is so
strong that many Americans do not recognize that others cannot logically
rely on it as an absolute means of protection--particularly, if the United
States does not actually have the capability to survive the war that might
result.

We have already indicated in the Introductory Comments that, when
pressed, hardly any American seems to feel that the United States would or
should accept the certain loss of half or more of its population for any
national interest other than those which directly determine the basic se-
curity of the United States itself. Actually, many Americans are caught
between considerations of national survival and an abhorrence of mass vio-
lence, and their sense of unqualified obligation to allies. As a result
they have adopted what seems to the editor a confused policy. Consider,
for example, the following two sets of statements, the first from Presi-
dent Kennedy, and the second from Secretary of Defense McNamara. While
ostensibly addressed--at least in part--to the alliance problem, neither
seems to grapple directly with this issue: If the Soviet Union attacks
Europe without attacking the United States, does or will the United States
then attack the Soviet Union in what is technically a _first strike_, and
risk a Soviet retaliatory blow? Under what circumstances? The first
quotation of each set suggests either that President de Gaulle is right
or that the issues has not been met squarely in the American government.

Mr. Kennedy:

> Our arms will never be used to strike the first blow
> in any attack. This is not a confession of weakness but
> a statement of strength. It is our national tradition.
> We must offset whatever advantage this may appear to hand
> an aggressor by so increasing the capability of our forces
> to respond swiftly and effectively to any aggressive move
> as to convince any would-be aggressor that such a movement
> would be too futile and costly to undertake. In the area
> of general war, this doctrine means that such capability
> must rest _with that portion of our forces which would sur-_
> _vive the initial attack_. We are not creating forces for
> a first strike against any other nation. We shall never
> threaten, provoke or initiate aggression--but if aggression
> should come, our response will be swift and effective.
> [Our italics] [2]

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[2] John F. Kennedy, Special Message to Congress on the Defense Budget,
March 28, 1961.

So long as our presence is desired and required, our force
and commitments will remain. For your safety is our safety,
your liberty is our liberty, and any attack on your soil is
an attack upon our own.[3]

Mr. McNamara's statements:

A very large increase in the number of fully hard
Soviet ICBM's and nuclear-powered ballistic missile-launch-
ing submarines would considerably detract from our ability
to destroy completely the Soviet strategic nuclear forces.
It would become increasingly difficult, regardless of the
form of the attack, to destroy a sufficiently large propor-
tion of the Soviet's strategic nuclear forces to preclude
major damage to the United States, regardless of how large
or what kind of strategic forces we build. Even if we were
to double and triple our forces we would not be able to des-
troy quickly all or almost all of the hardened IC M sites.
And even if we could do that, we know no way to destroy the
enemy's missile-launching submarines at the same time. We
do not anticipate that either the United States or the Soviet
Union will acquire that capability in the foreseeable future.
Moreover, to minimize damage to the United States, such a
force would also have to be accompanied by an extensive mis-
sile defense system and a much more elaborate civil defense
program than has thus far been contemplated. Even then we
could not preclude casualties counted in the tens of millions.
What we are proposing is a capability to strike back after
absorbing the first blow. [Our italics][4]

...The term 'unacceptable damage' is a relative one. ...For
example, we have made it quite clear that the defense of
Western Europe is as vital to us as the defense of our own
continent and that we are prepared to back up our commit-
ments there with our strategic nuclear power no matter what
degree of damage might result should the deterrent aspect
of this policy fail. [Our italics][5]

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[3]Speech of President Kennedy in Bonn, Germany, June 23, 1963, The
New York Times, June 24, 1963. The suggested policy is closer to CA or
CFW, than NCF.

[4]Statement of Secretary of Defense Robert S. McNamara Before the
House Armed Services Committee, The Fiscal Year 1964-1968 Defense Program
and 1964 Defense Budget, January 30, 1963, pp. 29-30.

[5]Secretary of Defense McNamara, Military Procurement Authorization,
Fiscal Year 1964, Hearings Before the Committee on Armed Services, United
States Senate, p. 89. He is suggesting that we have a CPW policy.

These statements are not, of course, necessarily contradictory, but they do seem to evade the central question which de Gaulle has asked so many times. As long ago as November, 1959, he said in a press conference:

> Who can say that if in the future, the political back-
> ground having changed completely--that is something that
> has already happened on earth--the two powers having the
> nuclear monopoly will not agree to divide the world?
>
> Who can say that if the occasion arises the two, while
> each deciding not to launch its missiles at the main enemy
> so that it should itself be spared, will not crush the
> others? It is possible to imagine that on some awful day
> Western Europe should be wiped out from Moscow and Central
> Europe from Washington. And who can even say that the two
> rivals, after I know not what political and social upheaval,
> will not unite?[6]

He has also said that even if the United States were willing today to live up to its guarantee to Europe, in spite of the fact that it might entail national annihilation, this surely cannot reliably be our long-term policy. That is, the policy could change--and indeed it would hardly be astonishing if some future President of the United States were to conclude that no for-eign obligation really called for the United States to commit suicide. It should be noted that one cannot imagine a European nation committing sui-cide for the sake of the United States (see the previous discussion of Pre-emptive and Preventive Surrender, page 108, particularly the note); and thus, by mirror-imaging, Europeans come to doubt our resolve as well. One judges that our European allies are to be pardoned if they believe that the U.S. policy itself may eventually include some degree of pre-emptive or preventive accommodation. Thus, the American sense of respon-sibility towards allies, the fourth consideration on the list of Level One constraints, sometimes makes us unwilling to look at objective possibili-ties and the need for programs that can substitute for sheer resolve.

The next consideration, that attitude imposed by a particular view of history, is unquestionably influential not merely in this country but in the West as a whole. But the United States tends to a particularly strong (and in the view of some critics, naive) version of the belief that history is leading to a pentultimate stage in which the world will enjoy a peaceful international order. The idea that history has an end or a goal, and that justice and peace can be expected eventually to pre-vail throughout the world--that, in the words of the prophet Isaiah, "They shall beat their swords into plowshares and their spears into

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[6]The New York Times, November 11, 1959.

pruning hooks: Nation shall not lift up sword against nation, neither shall they learn war any more"--is a highly original Western notion, not found in the literature of other societies. Most of the Indo-Germanic tribes had a mythology which placed a golden age at the beginning of history rather than at the end. Where they had an eschatology, as in Teutonic mythology, the end was almost invariably the Dawn of the Gods and ruin and destruction for humans. The Asian civilizations have tended toward a cyclicic conception of history, or to a view of history as a decline from an ideal state. The Western notion of teleological history, and the West's belief in a human obligation to exploit and shape the social and physical environment, has Greek, Hebrew and Christian sources. It has repeatedly been reformulated throughout the development of Western thought, the most familiar, and perhaps the most influential, of modern formulations being Marx's dialectical interpretation of historical process.

But Marx expresses only a single version of the idea of a purposive history. It has been important in modern West European and American political philosophy. Its influence upon American thinking is clear enough in President Wilson's program for a League of Nations that could establish a world "safe for democracy," in the pronouncements of U.S. war aims during the 1940's, and in the establishment of the United Nations. Its influence is evident in much contemporary discussion of regional and world political federations and in programs for world law. It has influenced, and undoubtedly will continue to affect, American policy in ways not necessarily consistent with narrow self-interest.

The final category in our list--specific ethical or religious constraints on war--does not consist in assumptions or articulated attitudes, but in the specific conclusions of a very long tradition of both religious and secular thought in our society about the ethical issues of war and violence. As a single instance, recent remarks by Pope John XXIII had a marked effect upon many Catholics as well as upon a wider community. In the encyclical Pacem in Terris, the Pope observed that "in this age which boasts of its atomic power, it no longer makes sense to maintain that war is a fit instrument with which to repair the violation of justice."[7] This statement has been interpreted by some as a general condemnation of participation in any preparations for nuclear war. Be that as it may, it obviously expresses a concern, and a moral judgment, that is very widely held in the world today, and not only by Christians. The concern is not one to which those who are professionally concerned with war can be indifferent, whatever the judgment they themselves may have made about the morality of nuclear war or of specific nuclear strategies (or even if they reject ordinary "moral" discussions of war as unimportant or irrelevant--itself a moral judgment on their part). The editor of this report believes that the use of nuclear weapons to threaten the cities of an opponent is morally justifiable, and this obviously is the ethical position upon which the American government has acted since the 1940's. But the

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[7]The Pope Speaks translation, article 127. This translation differs somewhat from that of most U.S. newspapers, but seems to be more accurate.

editor would also argue that unless the moral implications of nuclear war-
fare are faced and debated, the consequences for the United States could
well, in the long run, be an erosion or collapse of assurance, or a grow-
ing public acrimony. Those who believe that nuclear strategies (or par-
ticular nuclear strategies) are morally justifiable have, it would seem,
the duty to clarify and define their own positions, and to join ethicists,
theologians, and publicists in the public debate. It could be a tragedy
if responsible officials declined to enter a discussion that might
strengthen their own positions, and certainly would define and clarify
them. And if their positions were to be seriously challenged or weakened,
it might be that--in the long run--these challenges would in any event be
inevitable; and to have faced the fact early would be better than to wait
for a time of crisis.

In many cases the mere raising of moral issues may open a discussion
in which it will be found that normal prudence counsels restraint. In
other cases, one can imagine instrumental and moral, or other agonistic
considerations, being at odds with one another. In any case, the erosion
of agonistic, logistic, and familial limitations upon war in our century
has thrown a very large burden upon the instrumental mode of limiting war
and political conflict. And instrumental considerations--considerations
of reasonable effect, of politically proportioned gain, of profit and
loss--have themselves been ignored or de-emphasized in much of this cen-
tury's international violence. This is a problem of peculiar weight for
Americans, since there is, as we have observed, and as most historians
and political scientists would acknowledge, an American tradition of un-
limited war to destroy an enemy conceived of as a moral outlaw. Whatever
the other criticisms that may be made of this American attitude, it re-
flects a state of mind that, in an age of nuclear bipolarity and nuclear
retaliatory systems in more than one nation, could prove to be ultimately
disastrous.

Modern strategists have been concerned to reinforce and restore in-
strumental limitations upon international violence. The moralists and
ethicists have also attempted, with varying degrees of success, to bring
their disciplines effectively to bear upon national policies; and strat-
egists must clearly welcome--whether for expedient or value reasons--
whatever contribution they can make to a problem of almost unbearable
complexity.

Thus it would not be inappropriate for this report to comment on the
merits of various positions as problems in ethics, values, and morality.
But while the strategist or military operator, as a public man rather than
as a private one, can presumably only <u>act</u> as political authority and ulti-
mately the public commands him to do, he can counsel, advise, and argue
both within the system and, as a private man, outside it. The debate on
these issues--which of course is ultimately a moral debate, whether the
positions of the participants are or are not explicitly religious or
"ethical," or self-consciously pragmatic or "expedient"--would undoubtedly
benefit from his participation, and its conclusions may determine the
strategies which the professional military man is given to carry out.

From this point of view a brief discussion of the doctrine of Just War may usefully be included in this report. While this doctrine is not the only approach to these moral and theological problems, it is one which may be consonant with some of the ACWS's considered in this report. More important, it is perhaps the best-developed formulation of Christian thought on war in the West and is in some degree accepted by Catholic, Protestant, and Jewish thinkers, and has already influenced many strategists as well as laymen and officials.[8] Finally, Just War tradition has a long history of relating ethical norms to changing international conditions. In its Christian forms, Just War doctrine has been applied to such diverse situations as the Roman Empire under barbarian attack, medieval feudalism, the religious wars of the sixteenth and seventeenth centuries, and the wars of European nationalism. The problem of change is not new to the theory, even though some contemporary changes are. Nevertheless it has maintained a unity of foundation, purpose, and to a lesser extent, of details.[9]

One must distinguish between the foundation of the position and its concrete rules. The foundation is the idea of Christian love or charity, and the belief that justice is consonant with love, and indeed indispensable to a society whose primary value is love or charity. The purpose of Just War theory has been to show how justice can govern the use of force. Love and force are not contradictions, according to this position; force may surve the purposes of love. But because force involves destruction, it must always be kept under close watch.

Augustine (and the most influential Catholic and Protestant thinkers after him) held that love requires the forcible restraint of injustice. One can rightly use force and if necessary kill to protect people from injustice and injury. At the same time the purpose of protecting the weak from harm and injustice requires restraint in the use of force.

The Just War position stands in sharp distinction from two other theories influential among Christians. The first, pacifism, interprets love so as to reject participation in war, usually prohibits any killing at all (though some who reject war accept domestic police action), and sometimes objects to force of any kind. The second, which we might call the "crusade" state of mind, is at the opposite pole. It calls for war against an unmitigatedly evil enemy in behalf of a righteous cause. This

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[8]Dr. Alain C. Enthoven, Deputy Assistant Secretary of Defense for Systems Analysis, observed recently that "the potentially catastrophic character of thermonuclear war has forced practical decision-makers, reasoning in a secular context, to adopt a set of criteria very much like those of the traditional Christian doctrine and to apply them to the design of the military posture of the United States."

[9]Most of the material on Just War Doctrine has been abstracted from a much longer and fuller treatment prepared for the Martin Marietta Contract by Joseph L. Allen, in a report, The Relevance of Just War Doctrine for Present and Future Wars.

outlook encourages unlimited wars. Just War theory in the sense stands between these two poles and in another sense rejects a position they both hold for different reasons--that moral restraint and war are inconsistent with one another.

The Conditions for a Justifiable War

The details of just war theory are an effort to state the limits that Christian love demands for the justifiable use of force. The usual conditions are of two types: First, when is war permitted? Second, what conduct is permitted in war? Rather than survey the many variations, we shall summarize a characteristic statement of the 1930's.[10]

Five conditions must be present for war to be permitted. It must

(1) "Have been declared by a legitimate authority."

(2) "Have a just and grave cause, proportioned to the evils it brings about."

(3) "Only be undertaken after all means of peaceful solution of the conflict have been exhausted without success."

(4) "Have serious chances of success."

(5) "Be carried out with a right intention" (that is, for peace, to promote the good and avoid the evil, and not for reasons such as hatred or revenge).

The above conditions are consistent with such strategies as MFD, WS, DI, ACD, EI, NCF, and CPW. They are probably inconsistent as they stand with the action policies of MD, FD, SC, CH, CFS, PMR, and NMR.

The same source states the following restrictions on the conduct of war:

(1) Belligerents must respect the moral law and the laws of war recognized by custom, treaties, and general conventions, although within these limits it is permissible to do what is necessary for the defense of the common good.

(2) A declaration of war must precede forcible action so that the opponent may have opportunity to repent of his injustice.

(3) Belligerents may not perform acts "wrong in themselves," such as treason, breaking oaths, and assasination.

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[10]John A. Ryan and Francis J. Boland, Catholic Principles of Politics (New York: Macmillan Company, 1940), Chapter 20.

(4) Belligerents may not perform acts of useless cruelty. One
     should use force only to the extent required by the cause he is
     defending.

(5) Prisoners are to receive humane treatment.

(6) Belligerents may not directly and intentionally attack noncom-
     batants. It is permissible, however, to fire on centers of
     military resistance even though noncombatants will die as an
     unintended result, provided there is a reasonable proportion
     between the importance of the military goal and the harm that
     comes to noncombatants (the principle of double effect).

(7) Enemy possessions which by nature cannot be put to military uses
     must be spared (e.g., churches, libraries, historical monuments).

It is very difficult to reconcile the above restrictions on conduct
with most of the action policies we have associated with the fifteen ACWS's.
The major difficulties lie with points 6 and 7. However, some have tried
to do the reconciliation by concentrating on the idea that the concept of
deterrence now dominates the concept of war fighting and deterrence-dominated
strategies can be reconciled with the above as follows:

One notes that as far as the first five conditions on page 256 are
concerned:

1. The missiles are indeed procured by legitimate authority.

2. If the deterrence words, it will in fact, prevent the grave
    evil of a Communist victory and at least in some versions of
    MD, FD, MFD, ACD, NCF, and NMR, the minimum amount of deterrence
    that is considered satisfactory is procured.

3. All the ACWS's would argue that there are, indeed, no other
    acceptable means of protecting the nation.

4. it does, indeed, have a serious chance of success--deterrence
    may work.

5. It is carried out with the right intention since its objective
    is not aggressive but to avoid the domination of the world by
    Communism.

And finally, one can try to answer the objection that if deterrence
fails, the system will kill many innocent people with two arguments:
(1) that this has been true in almost all wars in the past; the unavoid-
able by-product which one had no intention of doing unnecessarily, or
(2) there have been several attempts to reconcile points 6 and 7 with a
deterrence strategy as follows: "We have no intention of using these
missiles, against noncombatants, and, if in fact deterrence fails, we
will not do so. It is not our fault if the other side, noting our capa-
bilities, jumps to other conclusions."

To some degree this seems disingenuous, and in any case, it is a
form of pre-emptive or preventive surrender with all the disadvantages
that this entails. We discuss the first position further on the next
page. We just note here that, subject to a certain lack of reconciliation
with points 6 and 7, one can argue that even EI and CPW meet the other
restrictions on conduct, and that MFD, WS, DI, ACD, NCF, and CFS, at least
in some of their versions, are also more or less reconcilable with ele-
ments in the ethical formulation, though DI, ACD, and WS are more easily
made compatible than the others.

These attempts inevitably are inadequate. Indeed, any strategy
which, in a theoretical formulation, seems consistent with a given defi-
nition of morality in war remains to be tested by the actual provocations,
conditions, political and military purposes, and action policies. More-
over, there remains--with our ACWS and with nuclear strategies in general--
the fundamental problem of the legitimacy of causing, or threatening to
cause, large numbers of civilian casualties (even as the unintended vic-
tims of counterforce attacks), which is the central moral issue posed by
modern weapons of mass destruction.

The effort to write strategies that attempt to be explicitly re-
sponsive to a particular formation of ethics seemed important for several
reasons. It can contribute to the theoretical discussion. It can also,
and this may be even more important, illustrate to a professional mili-
tary audience the significance of the ethical problem. It sometimes
happens that military and political professionals deliberately avoid the
moral implications of their programs because they believe that the pro-
grams are necessary and yet--they fear--may be judged immoral. This
avoidance of the issue is, of course, a moral position itself, and one
for which the individual may pay a high price in his own emotional life.
But the society, and indeed the narrow military and political interest,
may also suffer heavily. No society, no government or individual, can
expect indefinitely to act efficiently under conditions of moral inse-
curity, doubt, or guilt. No society can expect to cope with severe in-
ternational challenges and crises if it is not itself sensstive to the
issues of value that are at stake, and if it is not reasonably confident
that its policies are warranted by the values professed in the society.
This is the content of that "assurance" which, in strategic discourse,
is usually listed as a major factor in national capabilities. If the
ethical issues of nuclear war are frankly faced within the professional
community as well as without, some resolution of the issues may prove
to be possible. It may be found that apparent strategic necessity and
the moral demands of the society are not, as often believed, irrecon-
cilable, even though some accepted practices are ended or some habitual
beliefs redefined.

The dialogue between strategists and ethicists has, as we have re-
marked, already begun. The Just War doctrine itself is receiving con-
siderable new analysis. Contemporary reaction to the doctrine varies
widely. Many writers have argued strongly for its continued validity.
They maintain that the doctrine is basically adequate and the problem
is simply to show how it can be applied to the conditions of modern war.

They do not assume that the application will be simple nor that it will fit easily with current military practices. On the contrary, they attack the widespread disregard for restraint in war and call for attitudes, procurement policies, and war-fighting plans that will make possible greater discrimination in war.[11]

Critics of the theory can take any of three stances. First, some object that whether or not morality permitted participation in past wars, present-day warfare with nuclear weapons is so destructive that it cannot be conducted within the limits set by Just War theory. Either from another moral position, or on their reading of Just War doctrine itself, these writers reject the idea of a justifiable war with nuclear weapons.[12]

An almost opposite position is possible. Critics can agree with the preceding position that morality is incompatible with modern war and then conclude that their only alternative is to take part immorally in war. Theologians are unlikely to take this position, but it is probably the stance of a significant number of church members. Among secular writers on the subject, Hans Morgenthau's understanding of morality and international politics, while not fully consistent, sometimes seems to be akin to this position.

Criticism is possible from a third position. One can agree with Just War theory that participation in national defense can be justifiable today as previously, and that restraints are possible, and at the same time object to the way the doctrine formulates its limitations. Both other types of criticisms deny the possibility of moral restraints in modern war; this approach, on the contrary, accepts the Just War task of finding moral restraints, and seeks limits relevant to present conditions.

Criticism of the theory from this third position does not affect its main contentions, that war can be justifiable and that it can and should be limited. The major difficulty of Just War doctrine is the seeming incompatibility with modern deterrence theory. Just War theorists argue against a deterrence stance that threatens noncombatants directly, even if it never leads to an attack. This deterrence posture is held to be an intention to strike the innocent, and so a moral evil. The difficulty, of course, is that under the conditions of modern war, a countervalue posture, however far it may be kept in the background, seems necessary to deter expansionist and morally insensitive nations.

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[11]This position can be found in Paul Ramsey, op. cit., a Protestant approach, and among the many Roman Catholic treatments, in Thomas E. Murray, Nuclear Policy for War and Peace (Cleveland: The World Publishing Company, 1960), and many of the chapters in William J. Nagle, ed., Morality and Modern Warfare (Baltimore: Helicon Press, 1960).

[12]Cf. Gordon C. Zahn, "Social Science and the Theology of War," in Nagle, op. cit., pp. 104-125; Walter Stein, ed., Nuclear Weapons: A Catholic Response (New York: Sheed and Ward, 1961).

For example, if we go back to the simple P-Q model of "deterrence with
invulnerable missiles," we note that in this situation the only way
one side can defend itself with its missiles is to threaten the other
side's population. There is no other use for the missiles. The alter-
native would be either accommodation or some kind of nonnuclear resist-
ance which might or might not be effective. The crux of the moral prob-
lem posed by nuclear deterrent and war-fighting strategies is the gen-
eral principle that a licit end cannot be sought by means of intrin-
sically immoral means (i.e., through the deliberate killing of noncom-
batants, or the deliberate destruction of nonmilitary objectives). A
strategy that obtains its goal by means of directly illicit acts would,
by the traditional standards of Just War doctrine, be an immoral strat-
egy. But in addition to the question of whether it can be licit to
threaten an act which, if carried out, would be immoral, there are ad-
ditional questions: If a counterforce strategy, which did not intend
the deaths of civilians, would nevertheless result in very large numbers
of unavoidable civilian casualties, could those unintended deaths be
considered a tolerable evil consequence of a legitimate act? What types
of counterforce strategies, under what restraints, might, by these stand-
ards, be considered legitimate? What moral complexities are introduced
when the enemy, also armed with nuclear weapons, threatens not merely the
material interests of a state but its ethical and ideological character?
On the other hand, can any state claim the competence or right to demand
that its population, or a major part of its population, risk destruction?
Can it claim a right to inflict destruction of the social structure upon
another society? Is, as the Pope seems to suggest, war today dispropor-
tionate as a remedy for any conceivable political injustice? These are
among the new issues which the conditions and weapons of modern politics
and war have raised.

As many theorists of the Just War doctrine would acknowledge, some
of the familiar formulations of the doctrine have in important respects
been rendered irrelevant: they presume conditions that no longer exist.
But whether the doctrine itself can, in its essentials, be applied to the
new problems in a way that contributes to the just employment of force
is another matter. An answer may be sought in a consequential theory
of ethics rather than in the ethical theory of means characteristic of
most past versions of this particular doctrine.[13] But it may also be
that the fundamental moral vision of the West is irreconcilable with
many contemporary strategies. It may be that governments in fact face
a choice between strategies that in important military ways are disad-
vantageous or even dangerous, and more efficient strategies that con-
tradict ethical values that have been crucial to the West and are op-
posed or resisted by major elements of their own societies. These is-
sues must be taken into consideration in any view of the strategic
debate of the 1970's, for they are likely to be of increasing signif-
icance and weight in the professional debate as well as in public and
political opinion.

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[13]See Allen, op. cit.

Level Two: The National Interest and Beyond

We now come to the level which we refer to as enlightened national
interest. This tends to be the most confused of the levels from the
viewpoint of motivation because one cannot easily tell what it is that
motivates the proponents of a particular measure. In fact, as we have
mentioned, there is a tendency to emphasize, for public consumption, the
opposite of real motives. The selfish individual emphasizes unselfish
aspects, and vice versa. And there often is a mixture of motives among
supporters of any policy.

American generosity towards its allies (Marshall Plan), neighbors
(Alliance for Progress), and defeated foes (Germany, Italy, Japan), is
an example. In order to pass aid measures in Congress it has been thought
necessary to demonstrate that they are, in some measure, in the national
interest, but also that they are dictated by such considerations as
humanitarism, alliance solidarity, and fraternal generosity.

Let us list some of the items which seem to fall naturally at this
level:

1.   SYSTEM BARGAINING AND SYSTEM CONSERVATION

2.   COMMON INTEREST IN SURVIVAL

        No Doomsday Machines
        Restrained Warfare (Instrumental or Agonistic)
        Arms Control
        International Security (World Order)
        No Contamination of World Environment

3.   COMMON IDEAS AND IDEALS

        Human Dignity
        Four Freedoms (of Expression, of Religion, from
            Want, from Fear)
        Equality of Opportunity

4.   COMMON INTERESTS REQUIRING ACTIVE COOPERATION

        World Health & Nutrition
        Trade Links and Communications
        Transport, Traffic, Travel & Tourism
        International Law, Regulations & Agreements

5.   "A DECENT RESPECT TO THE OPINIONS OF MANKIND"

        Peaceful National Image
        Wars Must Appear Defensive or "Just"
        Generosity to Friends, Neighbors & Defeated Foes

We will not spend too much time on this level because most of the crucial questions tend to arise at the previous and the following levels. We will, however, discuss the concepts of System Bargaining, the Common interest in Survival, and Common Interests Requiring Cooperation, all of which, despite clear elements of self-interest, almost invariably include elements or Beyond the National Interest considerations.

System Bargaining

System bargaining is used here as a general expression for situations in which all or almost all members of a system would be better off if every individual abided by certain rules. It is a characteristic of such situations that while all members would be worse off if the rules were generally broken, individual members of the system can gain great individual advantages by breaking them, provided that this is not done by too many other members of the system. That is, from the viewpoint of any individual, A, who is making purely selfish calculations, situations are preferred in the following order:

1. A "cheats" but nobody else is induced to cheat by his example.
2. Nobody cheats.
3. Others cheat, but if A joins them, the stability of the system is endangered, so A does not cheat.
4. Everybody cheats.

In some sense all human societies contain elements of such systems. Thus all have to cope with the problem of seeing to it that rules essential to the system are generally obeyed. Societies have achieved this essential degree of obedience in a variety of ways:

a) by coercion and deterrence (the use or threat of force)
b) by "contractual" obligations (quid pro quo or instrumental considerations)
c) by agonistic rules (religious or other codes of conduct)
d) by the use of love and comradeship (familial influences)

The important role played by "system bargaining" is illustrated by the definitions of instrumental and agonistic wars: Instrumental war "is waged in order to gain access to values which the enemy controls. Thus it is the defeat of the enemy--not necessarily his annihilation--which is desired in the instrumental war....Restrictions of instrumental war are not rooted in respect for laws, God, or one's own honor; they are merely expedient in character."[14] Agonistic wars are a "...contest between opponents who delight in measuring their strength against certain rules

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[14]Hans Speier, Social Order and the Risks of War, New York: George Stewart, 1952, p. 255.

of the 'game.' The opponents participate in a common culture or respect
common cultural values even if they are representatives of different power
structures. It is these common bonds which make the contest possible.
The regulations reside in respect for values which none of the opponents
can be said to control. The values (customs, laws, codes of honor, etc.)
transcend the conflict."[15] It is clear that if the customs, laws, and
codes of these wars are broken too often the system disappears. Thus any
single nation or individual may be willing to accept a disaster for which
the survival of the system is little or no recompense. Yet it is very
much in the general interest for none to have this attitude.

On the international scene, some rules have been observed in the
relations among nations at almost all times in history, and all rules
have been broken at least occasionally. Now, however, the world is pass-
ing into a phase when even occasional nonobservance of some rules would
almost certainly be worse for all nations. For example, the Martian
anthropologist quoted on page 270 may be right, but even he would doubt-
less agree that human civilization could hardly recover from a series of
major thermonuclear wars spaced at ten- to twenty-year intervals. There
is a great incentive to establish some minimum rules to prevent the occur-
rence of such disasters: and it would be better for all nations if these
rules were generally kept rather than generally disregarded.

This does not mean that one or two particular nations might not find
it a great advantage either to break the rules, or, more likely, to
threaten to break the rules unless concessions are granted them. These
transgressor nations might even come to feel an obligation to break rules
in order to reform the old system--either to establish a purportedly bet-
ter and more reliable system or because they consider the old system to
be designed to protect the undeserved status and privileges of certain
states. Thus, while it is customary in the evolution of rules to stress
Beyond the National Interest considerations, it is unlikely that all par-
ticipants will share this attitude.

Common Interest in Survival

This obviously is related to system bargaining. Survival seems a
common interest of all nations, and in the nuclear age survival would seem
best assured by obedience to certain rules. We have already seen that
considerations Beyond the National Interest make it probable that Americans
would renounce the use of a Doomsday Machine as deterrence. But it is,
of course, in the common interest of all nations that no nation build a
Doomsday Machine. If one nation were known to be constructing one, other
nations might find it in their common interest to prevent it. This is
obvious in the case of Doomsday Machines, but it also holds in the case
of weapons systems so destructive that they seem conceptually close to
Doomsday Machines. For example, if the Chinese prepared a ship whose
entire cargo was a mixture of lithium deuteride and uranium, both the U.S.
and the Soviet Union might feel motivated to restrain them.

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[15]Ibid. p. 227.

There are also unilateral restraints. We have already mentioned that the U.S. decided not to build 50-megaton or larger thermonuclear weapons, although the Soviet Union is known to possess such weapons. While it is true that in most circumstances these weapons may be less efficient than several smaller ones, is not the only consideration which produced this American decision. Indeed, there are circumstances in which such weapons might be efficient, and it costs little in the way of physical resources to stockpile a small number of them to hedge against some political or military circumstances in which they might be useful.

Similarly, it is in the common interests of all nations that there be no dangerous contamination of the world environment, as with radio-active substances. This is a peacetime, as well as a weapons problem. Peaceful uses of nuclear energy are creating great amounts of radioactive waste, which has to be stored in such a manner as not to cause hazard to world health. The testing of nuclear weapons has long since caused world-wide concern about radioactive contamination, partially contributing to the agreement for the present test ban treaty. While weapons testing re-sults in comparatively low levels of fallout, a major thermonuclear war in which thousands of megaton weapons were ground-burst would undoubtedly create very serious threats to the world environment, partly from the in-crease in radiation, and partly from other causes not yet well understood, such as possible changes in climate. It thus obviously is in the common interest of all nations either to change a system in which wars are pos-sible, or to modify the methods of waging war and to impose restraint.

Throughout most of history human beings have generally also abided by war-fighting rules when they fought those to whom they were willing to concede a common humanity. The rules have differed in different civiliza-tions, and they have varied with the nature of the opponent. But some degree of restraint has been observed in all wars. It has at various times considered improper to attack an enemy who was not ready for the attack, to attack noncombatants, priests, heralds, or ambassadors. While religion has been an important factor in creating restraint in warfare, religious fanaticism has also been responsible for some of the most ruth-less of wars. In the fight against Amalek, Israel's archenemy, Samuel ordered the Israelites in the name of God to:

> "Utterly destroy all that they have, and spare them not,
> but slay both man and woman, infant and suckling, ox and
> sheep, camel and ass."

Charlemagne slaughtered thousands of Saxons because they refused to accept Christianity, and during the Crusades Christian Europeans waged ruthless wars of aggression against the Saracens of the Near East. On their way they put to death the defenseless Jewish populations of ghettos in their own countries. At the same time, however, the crusaders observed a high chivalric code among themselves. Eighteenth century war was dynastic, aristocratic, and closely limited. On the other hand, the democratization of war--particularly in the twentieth century--has led to violation of nearly all past rules and norms. It may be that the extremes of violence characteristic of modern mass ideological war will be checked by the fear of nuclear weapons and a trend back to military professionalization, but we do not know.

Level Three: The National Interest

We come now to the Third Level of Analysis--The National Interest. We are addressing the question: "In what ways can various ACWS's advance or hinder the national interest?"16 The table below gives some of the relevant national interests.

<div align="center">Level Three: The National Interest</div>

1. PHYSICAL SECURITY

> Immunity of National Territory to Threat or Seizure
> Safety of United States Citizens at Home & Abroad
> Security of United States Property at Home & Abroad

2. NATIONAL IDEALS (For Ourselves, Sometimes for Others)

> "The Blessings of Liberty to Ourselves & Our Posterity"
> Progress & Efficiency
> Reward for High Level of Effort
> Justice, Manifestly Done

3. THE AMERICAN WAY OF LIFE

> Preservation of U.S. Constitution and Institutions
> Preservation of Law and Order
> Maintaining High Rate of Growth & Expansion
> Preservation of High Living Standard

4. NATIONAL POWER AND INFLUENCE

> Protection & Support for Our Friends and Allies
> Deterrence & Constraint of Our Enemies
> Voting on & Amending Basic Changes in International
>   Relations
> Adequate Representation in New World Systems

5. NATIONAL HONOR & DIGNITY

> Prestige & Reputation
> Internal Loyalty, Support and Self-Respect
> Respect from Allies, Neutrals and Enemies

At first sight, one may have the impression that the only way ACWS's could further the objectives on the list is through successful deterrence.

16The adjectives "selfish" or "narrowly construed" should always be assumed as modifiers of the term, "national interest," since some use the term to include all three national goals.

We are familiar with the common phrases used to describe the current military situation:

> Balance of terror
> Two scorpions in a bottle
> Nobody wins a suicide race (or earthquake)
> Inevitable end of (history, civilization, human life...)
> Survivors will envy the dead
> Live together or die together
> War is unthinkable
> .
> .
> .
> We must live together or one of us will die
> Even if the probability of success were 90 per cent,
>   war would be "preposterous"

The editor added the two phrases at the bottom because he believes that they are in some ways more interesting and accurate than the usual ones. The first of the added phrases is a relatively frightening one (at least as opposed to the usual ones on the list), since it has an almost menacing if not threatening connotation. This sense of menace or threat, which is absent from the others, indicates or reveals the startling fact that most of the phrases are in a sense comforting, i.e., lead to the feeling that the deterrence of a war is a simple and logical consequence of the existence of nuclear weapons. The last phrase indicates the widespread belief that even if you cannot have deterrence by reliable threat, deterrence by uncertainty is still very likely to work. All of the above phrases indicate that the major or sole objective of a central war strategy is to affect the peacetime environment. Again, to quote John F. Kennedy (since we assume that the President is, and should be, a major source of information about the national interest):

> The primary purpose of our arms is peace, not war--to
> make certain that they will never have to be used--to deter
> all wars, general or limited, nuclear or conventional, large
> or small--to convince all potential aggressors that any
> attack would be futile--to provide backing for diplomatic
> settlement of disputes--to insure the adequacy of our bargain-
> ing power for an end to the arms race. The basic problems
> facing the world today are not susceptible to a military solu-
> tion. Neither our strategy nor our psychology as a nation--
> and certainly not our economy--must become dependent upon the
> permanent maintenance of a large military establishment. Our
> military posture must be sufficiently flexible and under con-
> trol to be consistent with our efforts to explore all possi-
> bilities and to take every step to lessen tensions, to obtain
> peaceful solutions and to secure arms limitations. Diplomacy
> and defense are no longer distinct alternatives, one to be
> used where the other fails--both must complement each other.[17]

---

[17]John F. Kennedy's Speeches, March 28, 1961, p. 99.

Actually, of course, there are a variety of positions one can have with
regard to the role that nuclear weapons and central war strategies play
in advancing the national interest. In order to make explicit some of
the variety that does in fact occur we append below a series of quotes.

> All nations must come to the decision to renounce force
> as a final resort of policy. If they are not prepared
> to do this they will <u>cease to exist</u>.[18]

- - - - - - - - - -

> Human civilization is not likely to survive the waging of
> many "maximum effort" wars. Therefore, if civilization
> is to survive, humans must either avoid war completely or
> wage it with restraint, with less than two or three per
> century being "maximum effort"--and even that is cutting
> it quite closely.[19]

- - - - - - - - - -

> Then it may well be that we shall, by a process of
> sublime irony, have reached a stage in this story where
> safety will be the sturdy child of terror, and survival
> the twin brother of annihilation.[20]

- - - - - - - - - -

> Contrary to popular belief, the further we advance
> into the ballistico-nuclear age, the more possible it
> becomes to outlaw violence, even if the aggressor nation
> is stronger and more richly supplied with combat means
> than the nation it threatens...[21]

> To humanity, it seems absurd that the very omnipo-
> tence of these new weapons can, at least temporarily,
> create a form of peace that would be more stable--and
> more advantageous--than any ever known...[22]

> If this must be the direction of the development,
> and if the movement is as irreversible as the one which
> culminated in the generalization of firearms, it would
> be better for the Western nations to reach an under-
> standing...by distributing its weapons among the cooperat-
> ing states.[23]

---

[18]Mainau Declaration.

[19]A current (1963) conjecture by a Martian anthropologist.

[20]Winston Churchill, House of Commons, London, England, March 1, 1955.

[21]Pierre Gallois, <u>The Balance of Terror: Strategy for the Nuclear Age</u>,
p. 113.

[22]<u>Ibid.</u>, p. 167.

[23]<u>Ibid.</u>, p. 229.

> In a dangerous world we cannot have peace unless we
> are strong. We cannot be strong unless we are fully pre-
> pared to exploit the biggest modern power, nuclear explosives.
>
> Nuclear weapons can be used with moderation on all
> scales of serious conflict. Nuclear weapons do not mean
> the end of the world, but they do mean the end of non-
> nuclear power.[24]

- - - - - - - - - - -

Before one could take any serious position on any of the above atti-
tudes one must make careful and explicit estimates or even guesses about
the future of the world, stability of the current system, likely dangers
of the arms race, and so on. In particular, the attitude one has towards
the medium- and long-run possibilities will play an important role in
deciding one's preferences.

Probably the easiest way to discuss this subject is in terms of the
Alternative World Futures set forth on pages 84-104, and the interested
reader might wish to skim briefly these pages again. We list some of the
possibilities below:

A Set of Suggested Alternative Future Worlds

ALPHA-1	Mostly Peaceful and Prosperous
ALPHA-2	Peaceful and Prosperous with Internationalist Emphasis
ALPHA-3	Peaceful and Prosperous with War Considered Unthinkable
BETA-1	Many Intra- and International Stresses--With Some Degree of Detente
BETA-2	International Stresses with Some Realignments
BETA-3	International Stresses with Some Degree of Successful Arms Control
GAMMA-1	Rapid Nuclear Diffusion
GAMMA-2	Nuclear Diffusion Developing True Nuclear Multipolarity
GAMMA-3	Extensive Political Multipolarity
DELTA	Containment and Confrontation between Major Power Blocs
EPSILON-1	Continuing and Widespread Communist Success
EPSILON-2	Communist Success with Antagonistic Chinese and Soviet Policies
ZETA	Decline of Soviet and Communist Power
ETA-1	"Collapse" of Europe with Isolationist U.S.[25]
ETA-2	"Collapse" of Europe with Interventionist U.S.[25]

(Eta, Theta, Iota, Kappa, Lambda, Mu)--Various kinds of new challenges to
the system from Europe, Japan, China, Latin America, Underdevel-
oped Nations, and Advanced Technology

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[24] Edward Teller (with Allen Brown), The Legacy of Hiroshima, Intro-
duction, p. viii.

[25] "Collapse" could be major political, economic, or ideological
change away from current system or trends.

NU   Major Realignments (See pages 99-100)

XI   Successful Arms Control

OMICRON   Gallois-Khrushchev-Millis-Other Non-War

PI   Basic Change in International System (See pages 93-95)

Any of the above worlds can be taken to be self-contained contexts within which the military planner or decision-maker may think about the total problem of the future, or one can mix various themes to get even more contexts. One function of these worlds or contexts is to stretch the imagination, to break free the narrow constraints of the immediate and the immediately probable. Another function is to furnish definiteness, preciseness, and detail. In neither case are the worlds necessarily intended to be predictive. At the best, one can think of them as being contenders in a horse race--a race which one hopes to influence.

Almost all agree that for the immediate future we are in some kind of Beta-1 world with real possibilities of Beta-2 and Beta-3 thrown in. The Alpha worlds are there mainly to indicate what we tend to strive for with our immediate and practical policies as opposed to our long-run and grand designs. Gamma, Delta and Epsilon worlds are all worlds which current U.S. policy is directly aimed at averting and it could be taken as a measure of our success or luck that all of these worlds seem to be of relatively low probability, at least by the early '70's. But none of them are utterly implausible for the Decade, and the Gammas, at least, may well emerge shortly thereafter. If and when they do come they may pose unique problems for weapons systems and developments of more general policy. Some kind of Zeta also seems conceivable, at least in terms of morale and aggressiveness. Eta-1 and Eta-2 are a special kind of challenge from Europe which we selected out because, as we indicated in our discussion of Nth country problems and European futures (pages 105-114), we may today be failing to consider these possibilities with sufficient intensity and imagination.

The really interesting problems, at least in the medium or long run, are of course the various kinds of challenges exemplified by the Eta, Theta, Iota, Kappa, Lambda, and Mu worlds, or such big changes as are exemplified by the Nu, Xi, Omicron, and Pi worlds. How seriously we should take these possibilities, how hard we should work for the ones we consider desirable, what risks we should run to avert the undesirable, all are questions which call for the usual searching examination. On the whole we judge that these examinations are not being done. We seem much too preoccupied with the upper half of the list to spend much time on this lower, but in some ways more interesting, portion of the list. And, of course, from the relatively narrow ACWS point of view of this report, we automatically tend to concentrate more on the obvious and dramatic military dangers inherent in Gamma, Delta and Epsilon than would be justified by a mere examination of the probabilities. It is in these worlds that we may be called upon to dominate the middle and intermediate range of the escalation ladder; in which we may be asked to invoke qualities of skill, shrewdness, and courage which could place severe demands upon American

military systems and national qualities. These are the worlds which might
very well call for weapons and command and control systems specifically
designed to carry out doctrines of Limited Strategic War with an ever-
present possibility of escalations to the upper rungs of the ladder. Few
of the other worlds obviously demand, at least for the immediate future,
such selectivity and refinement. In these other worlds the United States
is more likely to rely to a significant degree on conventional forces and
on normal diplomatic and political techniques where the major role of the
ACWS is in providing assurance, possibly escalation dominance, and in not
aggravating other problems or creating difficulties in other BNSP areas.
Hence the seeming overconcentration on Gamma, Delta, and Epsilon.

The Use of a Set of Alternative World Futures for the Strategic Dialogue

Thus faced with a set of futures the analyst, whether biased toward
ACWS problems or taking the more objective and balanced BNSP approach,
must decide such things as:

    a.   the most likely futures;
    b.   the most likely of the dangerous futures;
    c.   the futures which feasible U.S. policies might obtain or avoid;
    d.   the best policies for obtaining or avoiding these latter futures.

He would also want to know how these questions might affect: (a) nu-
clear force procurement, (b) nuclear weapon's use philosophy, (c) alliance
policies, (d) conventional force postures (i.e., choice of an ACWS and
other military and foreign policies).

Many suggest that decision-makers must "hope for the best and pre-
pare for the worst." Yet in fact no one does this, in the sense of un-
limited care. Moreover, in military affairs extreme caution (i.e., over-
procurement) may bring about new dangers. If the U.S. really prepared
for the Delta and Epsilon worlds during the next years, it would carry
relatively large defense budgets, with perhaps $50 billion a year on stra-
tegic forces by the end of the Decade (as opposed to about $5-10 billion
for U.S.-A and about $15-20 billion for U.S.-B). We would be serious
about ABM, civil defense, and mass troop transport development.

But the United States is not likely to make this effort. Our leaders
will hedge minimally against extreme dangers and continue to worry in peace-
time. They will often talk as if they consider themselves blocked chiefly
by budgetary and feasibility constraints. Yet strangely, this care may be
most productive in other ways and many will be acutely conscious of this
possibility. For no one knows over the next few years whether preparing
for dangers may enflame an arms race or war in the sense of self-fulfilling
prophecy, or whether acting like Alpha has come, or will come, can in fact
contribute to making Alpha a reality. There are thus both opportunities
and dangers in arms and arms limitations.

In Chapter XII we will consider again the choice problem for the 15
ACWS's--particularly the five main contenders. Choice of one or the other
of these strategies must, to some extent, be based on the analyst's belief

as to the "most likely of the dangerous futures," how their probability
can be influenced, and what preparations must be made as a hedge, even if
these preparations tended to increase the likelihood of some undesirable
events. We are not saying that hedging necessarily does so--the editor
tends to believe the opposite: in self-defeating rather than in self-ful-
filling prophesies. He is simply pointing out that we may have here again
the familiar strain between programs to improve deterrence and programs
for Improved War Outcome if deterrence fails.) The problem is one of
judging the gains and losses of hard- and soft-line positions.

We will consider the interactions between the above questions and
the Alternative Central War Strategies in the next chapter when we dis-
cuss the efficient allocation of national resources, as well as in Chap-
ter XII; but in this report this question will not be considered to any
great extent in conclusionary language. A good deal of the necessary
inputs which are needed for such discussion are found in the accompanying
classified reports. As far as over-all basic national security policy is
concerned, we will not consider these issues of desirable, peaceful, or
relatively nonviolent evolution more here. The interested reader can
find additional discussion from the point of view of this report in the
Martin-Marietta Report. We will conclude this chapter by asking what
national interests could be served by very violent evolution by various
ACWS's--that is, if deterrence fails what is our national interest then?

The Need for Limited Objectives if Deterrence Fails and the Consequent Central Role of "Negotiation"

We have already discussed some aspects of this problem. We have
pointed out, for example, the need for restraint and the need for post-
attack or intrawar deterrence and coercion. We would like now to discuss
the related need to try to terminate the war by negotiation while there
still are large numbers of weapons unfired on both sides, and the require-
ments all this implies for thinking ahead of time about peace treaties and
the like. The argument is that this will be in the national interests of
both nations, even though the increased possibility of having a less than
cataclysmic war could in some circumstances significantly decrease Type
I Deterrence.

One most important reason for including the subject of postattack
negotiation and war termination on the short list of topics to be dis-
cussed is that the subject is so undiscussed. The "incredibility" which
surrounds the whole subject of nuclear war gets even more intense and im-
penetrable when it comes to discussing how to terminate such a war. We had
a few comments to make in the last chapter about some of the relatively
technical issues, and will have some more in the next; here we would like
to discuss the national interest in being able to terminate a war that
has been started.

The first and most important interest is likely to be that, if there is
a war, neither side attempt to force the other to unconditional surrender--
not because it may not be desirable to do so (the reasons for wanting

unconditional surrender are increased in the thermonuclear war era rather
than decreased), but because it is even more desirable to get a cease-fire
before one's opponent has used up all of his weapons. One must negotiate
for such a cease-fire and, presumably, successful negotiations require
some compromises even on the "winning" side. That is, even if one is suf-
ficiently superior to be able to force a complete victory, such a victory
might still be Pyrrhic, too costly in comparison with a negotiated peace
in which the defeated side refrained from using its last weapons in return
for compromises by the winning side.

In the past this principle has sometimes been learned through the edu-
cational impact of great human and material losses, but in a jet-bomber and
ballistic-missile age events go so fast and improvisation is so difficult
that learning by experience is too costly and slow. If the war is to be
terminated by negotiation, before overwhelming damage has been done, it is
probably necessary for the strategy of the war to be clear to at least one
of the decision-makers even before the war has started, or at least in the
very early stages.

Further, one cannot, as in World War I and II, plan to fight the war
to a conclusion and then settle most of the details of the forthcoming
peace at a postwar conference. Since once there is a cease-fire, deter-
rence is likely to begin working again--as a two-way street--it has be-
come vital to have peace offers worked out so that the "prizes" can be
delivered, practically or completely, with the cease-fire; and it is im-
portant to start negotiations at the outset to coerce or persuade the
opponent into an early cease-fire.

All in all, it is most unwise for a country which hopes to terminate
a war on a reasonably satisfactory basis to defer consideration of these
items. If we were to pinpoint the single greatest lack in United States
national-security planning, it would be "insufficient thought about how and
under what conditions we would wish to terminate a war, and what kinds of
offers and threats we could make to the enemy." For this reason, calcula-
tions and map exercises on various tactics in thermonuclear war often have
an unreal quality. They start with the assumption of a strike by one side
with a counterstrike by the other and possibly stop there or go through
one or two more strikes. At this point, the residual forces are calculated
and the discussion stops. The role of threat and counterthreat, and of
these residual forces in such threats and counterthreats, at any point in
the war (in possibly inducing a successful termination at that point or
preparing for successful termination at a later point) is rarely, if ever,
discussed. Therefore there is no way of estimating or even seriously
discussing the payoff from increasing one's own residual forces or decreas-
ing the opponent's.

Similarly, it is difficult to make detailed plans for any other aspect
of war-fighting and postwar recuperation, since most people--including pro-
fessional analysts--find it difficult to think of how a thermonuclear war
could end and to visualize the corresponding later transition from the end
of the war to recuperation activities. The lack of discussion on these sub-
jects has all kinds of psychological effects on people's abilities to

visualize war as a real event with a beginning, a middle, and an end which is then followed by recuperation. Therefore, in order to answer both practical and psychological problems, it seems worthwhile to include some discussion of war termination in this report.

Let us consider only the national interest in negotiating the early termination of a war, deferring to the next chapter the tactics of such negotiations. While nobody, even if he knew all the details of how the war was started and how it was fought, could predict how long it would last and how it would end, one can still make many conjectures. Many assume that a thermonuclear war is likely or even necessarily going to be fought to the bitter end, with perhaps isolated "Polaris" submarine and missile detachments firing some last missiles months or even years after hostilities started. It seems most likely (and we wish to emphasize that this is not an unlikely contingency which is worth thinking about, but rather the likely contingency on which one wishes--possibly with some hedges--to base plans) that a thermonuclear war, if it occurs, will end with both sides having large amounts of surviving offensive equipment. It could end by some kind of a mutual but unnegotiated agreement to stop firing; it could end by detailed negotiations, by bargaining, by threat, by compromise, by formal cease-fires, by formal peace treaties, etc. There are many, many ways it could end. But one thing seems quite clear--as long as either or both sides has a responsible government in control of its military forces, they will be anxious to limit damage by terminating hostilities as early as possible. The common picture--which is probably derived from the World War I and World War II experience--of a desperate hanging-on until the last bullet is shot, the last missile expended, the last plane used up, is not a likely picture of World War III. This view of victory first--negotiations second--when translated into policy (or lack of policy), produced much unnecessary destruction and suffering in World War I. Today everybody is conscious of the possible mutual destructiveness of such last-ditch operations and the likely Pyrrhic character of a dearly bought victory.

One reason for the "total" character of World Wars I and II was the totality of the war effort and consequent "democratization" of participation. As a result the war aims had to be such as to rouse the enthusiasm of the man in the street. This phenomenon does not seem to affect World War III. There is not likely to be any drafting, training, war mobilization, bond drives, or even voting between the first and the last shot. This is likely to be a relatively technical war run by governmental authorities and technicians, with little or no attention paid to the immediate problems of support from, or morale of, the civilian population. This means that the war is much more likely to be fought relatively coolly and more likely to be guided by considerations of the national interests than would be the case in a war dominated by propaganda and emotion.

In any war between A and B, A has eight broad alternatives to consider, as follows:

  1. He can surrender unconditionally.
  2. He can accept a conditional defeat and still ask for a cease-fire on terms under which he retains forces and obtains guarantees.

3. He can try for some inconclusive outcome such as:
    a. the _status quo_ as it exists at the moment;
    b. some other compromise settlement that more or less reflects the current status of occupied and unoccupied territory or other accomplished facts but includes some _quid pro quo_ trades;
    c. for the _status quo ante_;
    d. disjunctive "solution" with little relation to current or past patterns.
4. He can claim victory but be willing to accept a cease-fire with conditions and guarantees satisfactory to his defeated but still armed opponent.
5. He can demand unconditional surrender by his opponent.

In an age of increasing weapon invulnerability, the outcome of even a general war is likely to be inconclusive whether it is fought in a carefully controlled fashion with relatively little unintended collateral damage to civilians, or whether it is fought more indiscriminately. (We are including the case of mutual annihilation as an indecisive outcome even if there is a technical win by one side or another.) Thus, the possibilities under (3) may characterize the most likely forms of one of these indecisive outcomes.

Of course, the outcome does not have to be indecisive. One side may possess an obviously significant strategic superiority or just have greater skill, luck, or resolution. It is also possible--and often overlooked--that unexpected tactics or weapons effects may bring a significant degree of victory to one side or the other. These possibilities are indicated in categories (2) and (4) above, where one side is basically defeated but still has great capabilities for inflicting damage on its opponent. The victor, though, can, on the one hand, threaten the defeated side with massive destruction (pointing out that such a threat is credible since, although he risks great damage, the damage will be bearable) and on the other hand point out there is available some sort of sensible peace treaty which may well reflect the huge disparity in threats between the two sides, yet be far from unconditional. The losing side may be allowed to keep a significant deterrent force, which would increase its reliance on the promises of the victorious side being carried out. As far as surprise attack is concerned, the victorious side could risk the losing side's keeping a deterrent force because, after all, it has a larger deterrent force and deterrence is likely to work again. There is, of course, always the possibility of a double cross by the superior side, but the situation is not very different from a prewar situation in which deterrence can be reasonably stable even if asymmetric. The more likely trouble is that, once the fighting has stopped, the superior side may not have a credible coercive threat.

Finally, one side may press for unconditional surrender. We have already suggested that normally this last alternative should be rejected; that is, the strategy even of general war should call for some sort of limited objective. This seems incomprehensible to many experienced and informed people. They argue that if the passions of World Wars I and II

forced or led us to unlimited objectives, even more will the passions of
World War III with its much greater destruction cause a similar emotional
commitment to total victory. Some also argue that total victory will be
even more important then. They feel that the only possible justification
for an all-out World War III would be the establishment of a viable inter-
national order with adequate arms control (i.e., world empire or world gov-
ernment). It may be impossible to establish such an international order if
the other side is allowed to retain independence of action.

    The above arguments have great force, yet are probably misleading.
First and most obviously, the immediate dangers in pressing for uncondi-
tional surrender may far outweigh the possible long-run advantages. Sec-
ondly, it is unlikely that there will be time for decision-makers to be
much influenced by the reaction of the general public. As alread, men-
tioned, the wars are likely to be short; it will not be necessary to main-
tain the loyalty and enthusiasm of the general public at a high level, and
the objective issues of risk and destruction are likely to dominate paro-
chial political considerations. Finally, it is unnecessarily defeatist to
believe that it would be impossible to organize a viable international or-
der if the opponent has any independence left. It is equally likely that
as a result of the necessary compromises, such an international order,
whatever form it takes, might be more prectical and viable than one
imposed in a humiliating fashion on a totally uncooperative opponent.

    What might these limited objectives be in the case of a war between
the United States and the Soviet Union? Among other things this would de-
pend on how the war started. If, for example, the Soviets launched a
ground attack on Europe, our minimum objective might be to stop their ad-
vance or to get their troops removed from Western Europe. A more ambitious
objective might be to ask that the satellites be removed from Soviet domina-
tion and direct Soviet influence be restricted to current Soviet borders.
An additional demand (that need not be part of the wartime negotiations)
could be that the satellites be allowed (or forced) to hold really free
elections, possibly under our supervision. A third possible objective
could be a rollback of the Soviet Union to something like her prewar bor-
ders. Or we could demand the partial disarming of the Soviet Union with
some kind of inspection. If we felt sufficiently powerful and secure, we
might demand that the Soviet Union not only be partially disarmed, but asked
to submit a portion of her sovereignty to international authority. The most
extreme objective might be the total disarming and occupation of the Soviet
Union. This last is close to or equivalent to unconditional surrender,
though there might be all kinds of promises made as to the limits of this
occupation and the final postwar settlement. Lastly, we could demand un-
conditional surrender with no promises or guarantees. There are additional
demands, which might or might not be realistic, that we could make to
supplement or complement the ones discussed above. Thus, we might try
to negotiate with Soviet military authorities and insist that the Communist
Party be overthrown. We might demand that there be some sort of free
elections in the Soviet Union. We might simply insist that certain indi-
viduals be removed. We might, during the war, try to kill some indivi-
duals because we felt we could not deal with them postwar, or to punish
them because they were responsible for the decision to launch an attack
on Western Europe.

On the Soviet side there is a similar range of possibilities. They have an additional degree of freedom in that they can threaten, and negotiate with, various European authorities. The most successful result of Soviet negotiations would be a collapse of the Europeans before or immediately at the onset of the attack. We have already remarked that such a pre-emptive surrender is not impossible, since many Europeans frankly believe that deterrence is supposed to deter, and that if it fails, the best tactic is "pre-emptive surrender." There are many ways in which the Soviets might try to capitalize on this view of the Europeans of their national interests and possibly on similar attitudes in our own country. We will discuss some of the possibilities in the next chapter when we discuss escalation and war termination from the political-military strategy and tactics point of view.

CHAPTER XI

U.S. POLITICAL-MILITARY OBJECTIVES

Introduction: Some Influences from Levels One, Two, Three and Seven

This chapter deals mostly with the political use of force, though it will also consider the military use of politics. We will consider the political implications of the potential as well as the actual use of force in both peace and war. Such use can be for the purposes of defense, denial, punishment, destruction, warning, bargaining, fining, deterrence, and so on. While we will consider all of these possibilities we will give primary attention to the use of force as an element of negotiation in a context of coercion.

We made the point in the section on System Bargaining (pages 263 to 265) that there are basically four contexts in which negotiation may take place:

1. Familial
2. Agonistic
3. Contractual
4. Coercive

The first obtains when there is a sense of community or shared fate or common interest in goals, and is a normal and comfortable context for Americans. Indeed, as we indicated in the previous chapter's discussion of Beyond the National Interest, such considerations play a large role in the American political viewpoint as a whole. Familial considerations usually exist in any negotiations among nations, even those with very different national characteristics from the United States.

We are probably stretching the word "agonistic" to make it cover the second context of negotiation, in which such factors as custom, precedent, sense of fairness, religious injunctions, codes of conduct, or of noblesse oblige or chivalry, affect negotiations, but no other word seems as appropriate. A good deal of behavior is regulated by such normative influences and ideals--even among the most cynical and depraved. It was the essence of the system bargaining concept discussed in the last chapter that large nations with a great stake in the status quo may find it especially useful to attempt to conserve and extend agonistic constraints. Unfortunately, agonistic rules, no matter how sacred or prized, cannot be relied upon to be observed by all peoples at all times. We must, therefore, along with our interest in "conservatism," be concerned about the possibility of accepting disastrous unilateral handicaps. We can and should be prepared to live with some cheating, but we must also be prepared, as indicated in the discussion of Just War Doctrine, to modify our own norms to some degree.

The third context, the contractual one, is particularly consistent with American and Anglo-Saxon traditions of civil law, life and business.

Quid pro quo is an eminently reasonable basis on which to conduct affairs
if there is no special reason to extend charity or altruistic help and no
customs or precedents to guide one. While Americans tend to believe that
it is useful and important to have friendly, personal relations among
potential contractors, they recognize that there is no absolute necessity
for such special relationships. Even two very hostile people can arrive at
a mutually beneficial agreement or one in which there is an adequate com-
promise between advantage and disadvantage. Indeed, many of the approaches
to arms control in the West which de-emphasize political aspects and con-
centrate instead on technical issues are pursuing a strictly contractual
point of view--one which, in fact, may not be as practical as it looks,
since these contracts are so difficult to negotiate. If two sides are
relatively hostile, the advantages and disadvantages are much harder to
balance.

Finally, there is the class of negotiation which takes place in an
atmosphere of some degree of threat or coercion. This, particularly if
the threat or coercion is both explicit and matter of fact, is neither
familiar nor comfortable for most Americans in either internal or external
relations, except in very special cases; and usually then the threat or
coercion is latent rather than manifest. It may indeed be one of the main
reasons why Americans find it difficult to believe that a war can be fought
rationally or reasonably, that, for the most part, Americans do not con-
sciously give force any rational or reasonable role in ordinary negotiations.
We feel that only a law violator, a criminal, a desperado, or a sick or
insane person, uses force. Therefore, we tend to believe that someone who
uses force is not only an enemy, but an enemy of humanity--an outlaw deserv-
ing of extermination, imprisonment, or medical constraint and treatment.
The crusade and even an initial pacifism come more naturally than the
restraint of the Just War.

This is a somewhat naive view. Force is a permanent element in human
society, used by good, bad, and indifferent nations and people. It has
been used rationally as well as irrationally, wisely as well as foolishly,
moderately as well as extravagantly. It is entirely possible for us, or
the Soviets, to use force in a reasonable fashion--at least we need not use
it in a wildly unreasonable and extravagantly reckless fashion.

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[1]Arms controllers sometimes do not realize how difficult. For ex-
ample, there is a favorite example of contractual arms control which goes
as follows. Assume there are two individuals who are going to fight a
duel to death with blow torches. The duel is to be conducted in a ware-
house filled with dynamite. One might conjecture that they could agree
to leave the lights on. There is undoubtedly powerful motivation for them
to do so. While both are agreed that only one is to survive, they would
each like some chance of being that one; neither prefers an effective cer-
tainty of both being killed. Yet they might still disagree on: How many
lights? Where? How bright? Can each wear glasses? Should the one with
greater visual acuity handicap himself in other ways? etc. In spite of
the urgent and overwhelming reasons for agreement, the details and basic
animosity may make it impossible to arrive at a contractual agreement.

This is true even though it may be unreasonable, if not immoral, to settle disputes by the use of force. Having unreasonably or immorally decided to use force, one can still wish to use it reasonably as opposed to recklessly. Both of the American biases--the unwillingness to initiate the use of moderate levels of force for limited objectives, and the too-great willingness, once we are committed, to use extravagant and uncontrolled force--are potentially dangerous and should be guarded against. These biases could have most serious consequences unless we deliberately and consciously think about ways in which violence may occur and still be kept relatively limited (as compared to an uncontrolled situation).

We will, in this chapter, consider the use of violence at all levels as an aid to pursuing national objectives. As indicated in the chart below, we will divide this chapter into two parts--Technical Problems, and Objectives.

Technical Problems

    A. Deterrence and Credibility--use of threats and warnings
    B. Escalation Theory
    C. Rationality-of-Irrationality and Committal Strategies
    D. Escalation, Controlled War, and War Termination

Objectives

    A. "Rational" Use of Levels Five, Six and Seven in all
        the BNSP areas to pursue National Goals
    B. Assurance and "Style"
    C. Affect behavior of enemies
        1. For short term
        2. For long term
        3. At lower rungs of Escalation Ladder
        4. At middle rungs of Escalation Ladder
        5. At upper rungs of Escalation Ladder
    D. Affect behavior of others
    E. Responsiveness

Deterrence and Credibility

The first of the technical problems is deterrence--the use of threats and warnings.[2] In a deterrent situation we are trying to dissuade the

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[2] We will define the distinction between threats and warnings in two ways. First following common usage we will define threat as a very specific statement as to one's response if one's opponent does or refrains from doing something. Threat would generally carry the connotation of a committal strategy and some degree of rationality-of-irrationality. Warnings differ from threats in that they do not emphasize the explicit description or definition of a consequence or retaliatory act. They emphasize instead the simple drawing of the opponent's attention to the implications or the seriousness of a certain matter and the inevitability, or extreme likelihood, of some escalatory response which will make the opponent sorry he did not acquiesce. Warning has the connotation of a simple calculation of inevitable consequences. If the threat has been firmly built into a reliable strategy of committal and it is not necessary to repeat the threat itself but simply to draw the opponent's attention to the existence of this committal or committal mechanism, then the threat itself partakes of the character of a warning. The above is a modification of a distinction put forward by Schelling. We will also use Schelling's distinction directly (see page 354).

opponent _from_ doing something (if we were trying to persuade him _to do_
something we would call it a coercion situation, although, to some degree,
the two terms deterrence and coercion can be used interchangeably).

Pierre Gallois has suggested a simple equation to measure the degree
of dissuasion:

Dissuasion = Credibility × Disutility

Any mathematician will recognize the above equation as being simply the
mathematical concept of expected utility stated in negative terms (as is
appropriate in a discussion of deterrence). There are, in fact, many deep
discussions in mathematics and logic showing why the above equation is the
proper one to look at for both "predictive" and normative purposes.[3] We
will not attempt here to get into the philosophical and analytical discus-
sions but simply ask ourselves to what extent the above is, in fact, nor-
mative or descriptive for actual human behavior.

To the extent that the potential disutility is just a question of
calculating the damage that would result from various acts, it has already
been discussed in Chapters VIII and IX. Credibility, however, is properly
a question to be dealt with at the political-military level even though it
may overlap, to some degree, with other levels, such as the first three,
and the seventh. The political-military character of the above equation
can best be seen by considering the following version of the deterrence
issue.

...who deters whom from what actions (alternatives) by
what threats in what situations in the face of what
counterthreats...and why does he do it?

The above is a paraphrase of a remark by Raymond Aron which illustrates
the richness and complexity of the deterrent concept. The two sets of
ellipses indicate that there are other things going on before and after
the question is asked.

In the military analyses we did in Chapter IX, we concentrated on
such things as actions, threats, and counterthreats. In a political analy-
sis we cannot ignore this previous military analysis, though we now must
also focus attention on the questions connoted by who, whom, alternatives,
situations, and why. (It should be specifically noted that we replace the
term "actions" by "alternatives" because the possible deterrence of an
action can only be judged by looking at the alternatives open to the indi-
vidual or nation.) Deterrence thus is a complicated relationship among
seven or eight variables, and one which could not, in fact, be covered
systematically in any discussion confined to this chapter. And yet, except
in relatively simple situations, credibility cannot really be estimated
unless one goes through such a complete analysis. Fortunately the relatively

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[3]We can think of dissuasion as being the "calculable" or analytic part
of deterrence. The who-whom...formulation indicates the importance of pos-
sible irrational elements.

simple cases tend to be the most important. In any case we can make up a
list of the kinds of things which could affect credibility. Any nation
interested in deterrence can take any of the following attitudes towards
the _alternatives_, _situations_, and some of the _why_ part of the full deter-
rence equation. The list below is a modification of one done by David
Lewis. It is apolitical in that it does not discuss _who_, _whom_, and part
of the _why_.

1. It's no problem; deterrence will be easy.

2. Dispense with difficult commitments.

3. Threaten graduated responses.

4. Warn of risk of escalation.

5. Warn of risk of inadvertent eruption in crisis (e.g., accident-
   prone alter plus instability).

6. Warn that you will not acquiesce--that some appropriate response
   will be invented if opponent does something "unacceptable."

7. Improve resolve by taking out insurance.

8. Depend on having effectively automated the response or devised
   another artificial method of committing oneself (as in the Nth-
   country controlled-response strategy discussed on pages 107 to
   108).

9. Depend on irrational resolve. If necessary, pose as a monomaniac.

10. Improve resolve by such short tactics as deliberately increasing
    appropriate acquisition and denial values (e.g., burn bridges,
    join irrelevant issues, solemnize committals, or otherwise lock
    oneself in).

11. Exploit massiveness in lieu of credibility.

12. Exploit frightfulness in lieu of credibility.

13. Warn that there are basic reasons why you _cannot_ afford _not_ to
    fulfill your threat (e.g., because of fundamental commitments,
    because of character of forces, because of lack of alternatives,
    etc. one is more or less naturally "locked in").

14. Warn that you _can_ afford to fulfill your threat.

15. Warn that you will show a clear profit through fulfilling your
    threat.

All of the above ideas are or can be used in various ACWS's to make, for
example, extended deterrence credible. The chart below indicates to what
extent they tend to be involved in each of the ACWS's. We use the notations
of Chapter III, i.e., (+++) means extremely concerned with, or central
component of, or major objective, or whatever the context would call for;
while (++), (+), (0), (-), (--), (---), are all gradations through (0)
(unconcerned or irrelevant) to (---) (extremely against or opposite of
major objective). (+/-) means mixed situation and (II) means large range.

To What Extent Does Each ACWS Try to Use Various Techniques
to Obtain Credibility for Its Extended Deterrence Capability?

ACWS	1 (Easy)	2 (Retrench)	3 (Gradu-ated)	4 (Risk Esc.)	5 (Risk Erup.)	6 (Don't Push)	7 (Insur-ance)	8 (Auto-mation)	9 (Resolve)	10 (Burn Bridges)	11 (Massive-ness)	12 (Fright-fulness)	13 (Locked In)	14 (Can)	15 (Want To)
MD	=	+++	0 to +++	- to ---	- to ---	0	---	---	0 to ---	0 to -	0 to ---	0 to ---	---	---	---
FD	=	+++	0 to +++	- to ---	- to ---	0	---	---	0 to ---	0 to -	+ to ---	+ to -	---	---	---
SC	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MFD	=	++	0 to +++	0	0 to --	0 to ++	0 to --	=	0 to ---	---	0 to ++	0 to ---	---	0 to ---	0 to ---
WS	=	0 to ++	0 to +++	0 to +	0 to +	++	0 to --	0 to ---	0 to ---	---	0 to +++	0 to +++	---	- to ---	0 to ---
ACD	=	=	=	=	=	0 to ++	0 to ++	=	=	=	0 to --	0 to ---	=	=	=
CH	0 to ---	+	-	0 to -	0 to ---	0 to ++	0 to ---	---	++	+++	+++	++	+++	0	0 to ++
DI	0 to ---	++	0 to +++	0 to ++	-/+	0 to ++	0 to +++	+ to +++	0 to +++	=	0 to +++	0 to +++	0 to --	+++	0 to +++
EI	0 to ---	+	0 to +++	0 to ++	-/+	0	0 to +++	=	0 to ++	=	0 to +++	=	0 to --	+++	0 to +++
LSR	=	+	+++	+++	+ to --	?	=	=	+++	=	++	=	=	=	=
NCF	+ I	+	0 to +++	0 to +++	0 to ++	0 to ++	++	+	+	==	0 to ---	0 to ---	0 to +	+	+
CPW	++	-	-- to +	0 to --	0 to ---	0	+++	---	0	-	0 to --	0 to ---	0 to +++	+++	++
CFS	++	-	-- to +	0 to +++	0 to ++	0 to ++	++	+ to ++	++	++	0 to ++	0 to ++	++	++	++
PMR	++	-	-- to +	0 to -	0 to --	0 to +++	0 to -	0 to ++	+	0 to ++	++	++	+	+ to --	-
NMR	+++	-	-- to -	-	---	0 to +++	0 to ---	0 to +++	+++	++	+++	+++	++	0 to --	---

We indicated that deterrence is a relatively simple concept in normal, day-to-day circumstances. In the thermonuclear age we do not have to be as paranoiac or intense as, say, the description of requirements for Type I Deterrence set forth on pages 211 to 213 in Chapter IX would seem to indicate to be desirable. However, as we also indicated in the discussion of the P-Q model of deterrence with invulnerable missiles, it can be very comforting to have a very high-quality deterrence capability in escalation-type situations and tense crises. And in such ACWS's as EI and NCF we are particularly interested in escalation-type situations, the EI deliberately procuring more deterrence and insurance because it wishes to have more assurance and greater sanctions, while NCF deliberately tries to achieve escalation dominance by keeping in the background, though not too far in the background, the implicit or explicit threat of a first strike if the nation is pushed too far or too hard. Let us therefore discuss escalation phenomena in order to get some orientation as to the requirements this possibility may lead to in the central war area.

Escalation Theory

We have already indicated that the idea of deliberate escalation as an instrumentality of negotiation--a calculated and often prudent, moderate and controlled use of force and threats in peacetime and limited war--is perhaps foreign to popular assumptions about the traditional American method of conducting relations with other great nations. Actually the United States has used force in this manner at least 70 times in the past, although usually against smaller nations. Today the manipulation of tension, the use of both real and symbolic force, the transmitting and receiving of threats and counterthreats are once again widely conceded to be legitimate or necessary elements in international policy. To the degree that relations between states involve conflict, force, perhaps in limited applications or even indecisive applications, is a fact of politics. This does not mean that acts to escalate are always desirable, or even that a clear-cut victory is always the proper goal of international negotiations or conflict, but it does not mean, either, that only defensive counterescalation is justifiable or that a nation ought never deliberately increase tension or the risk of war. No simple policy is likely to do. In this, then, it is clear that escalation is a new structuring, a new formulation of some of the oldest elements in the dealing of hostile, rival, or competitive states.

An objection to many contemporary formulations of escalation theory is that they seem to suggest an excessively rational series of events as governments deliberately vie with each other in a "competition in risk-taking." This objection is made with particular force to many discussions of nuclear escalation--of escalation to the higher rungs of the escalation ladder. A second objection is that escalation analysis often fails to weigh properly various uncertainties which are characteristic of actual escalation confrontations; there is, to take an elementary example, the ambiguity surrounding the determination of a city's worth should city-trading actually be carried out--one element in the general problem of understanding a foreign culture's evaluation of the relative importance

or value of various risks or losses, the uncertainties that lie in the
implications which will be read into the escalations of one nation by its
opponent, the emotional, moral and political inhibitions or influences
that affect the policies of nations.

These are serious matters that probably arise from the concentration
on actions-threats-counterthreats and situations-alternatives parts of the
analysis, and the partial or complete neglect of who-whom-why--which should
be equally emphasized in any Level Four analysis and integration; but in
this report we shall continue the misemphasis and focus on the first set of
relatively abstract characteristics, and on certain general variables that
enter into a nation's capability to carry out acts of escalation in the in-
ternational arena. We will cover hardly any of the who's and whom's and
only some of the why's. Subsequent discussions in other reports may then
modify this consideration of the skeletal structure of escalation. (See,
however, pages 159-162 for general discussion of who-whom and pages 163 to
169 and Stillman's paper for discussion of Soviet style and characteristics.)

Escalation Concepts

Escalatory actions committed before military hostilities have com-
menced may consist in statements of policy, warning, or threat made by
private individuals, groups, governmental officials and governments; in
unofficial or official propaganda (all of which may or may not reflect
actual plans or policy); in steps taken to increase a nation's military
capabilities; and in diplomatic, political and economic acts or threats.

Direct threats take the form of ultimatums or quasi-ultimatums: un-
less one side does or does not do a specified act, an act of retaliation
or of coercion will be carried out--even if it is not in the short-run
national interest of the threatener to carry out the threat. While direct
threats are usually explicit and active, this is not essential. A sentry
may not need to issue the command "Halt," if the cocking of his rifle is
audible to a trespasser. It also is possible to so connect activating
mechanisms that a direct threat may be carried out which would be beyond
the power of the designers to interrupt. Indirect threats usually are
conditioned upon subsequent events or actions.

As we have mentioned (note on page 283), warnings differ from threats
in that they do not emphasize making commitments with explicit description
or definition of the consequences that may result from an act of provoca-
tion (or which may be invoked if the opponent fails to accept a given de-
mand). "Warnings" instead draw the opponent's attention to the implica-
tions or the seriousness of a certain matter and the inevitability or
extreme likelihood of some response which will hurt the opponent.

Both threats and warnings may be delivered with varying degrees of
definition. They may be contained in the purportedly non-official state-
ments of prominent public figures, or in unattributed press reports, or

in reports attributed only in general terms--to "official circles," or
"influential quarters," (these, if only because their authority may be un-
clear, usually are warnings rather than threats). At the other extreme,
threats or warnings may be conveyed in the official statements of a gov-
ernment; and official statements, too, have degrees of seriousness that
are generally acknowledged by diplomatic convention, and are distinguish-
able from state propaganda (which may be violent while the official state-
ments, and policy, of a government are very qualified). Propaganda, of
course, is itself a weapon in international relations, and a means of
escalation.

If military hostilities begin, escalation is the intensification or
widening of the conflict or the threat to do so. If the escalation is
made at the point of a dispute in a manner more or less consistent with
previous escalation acts it is a simple escalation. If it is made at a
place which is some distance removed from the dispute, or if it brings
into contention new issues which are distinct from those of the original
dispute, it is a compound escalation.

If escalatory acts can be easily and rapidly rescinded, they may be
termed reversible acts, and examples would include such mobilization meas-
ures as military deployments, the recalling to active duty of reserve units,
or the activation of items normally kept in storage. Other escalatory acts,
irreversible ones, do not possess the quality of easy and rapid annulment.
Extension of the conflict to a broader geographical area, incorporation
into it of additional nations, or the breaking of precedents, would be
examples.

The major motivation of any particular escalatory act may be bargain-
ing (i.e., to exert pressure on the opponent), or it may be to warn, punish,
fine, deter, or redress. The warning function is obvious. One says, in
effect, "If we do this much we are likely to do more"; or the act may be
explicitly identified as a threat--as a commitment to further acts. Punish-
ment may be designed to exact revenge or to deter later acts. If one side
has established a scale of retaliations or punishments prior to the partic-
ular conflict, these punishments may be considered fines. The fine itself
may be looked upon as the price paid by a nation to carry out a certain act,
and some counterescalatory (or escalatory) acts are price-collecting in
nature.

Accidental, Inadvertent, Unintended and Unpremeditated Escalations

The first term refers, of course, to an escalation which starts as
the result of an error, internal mistake,[4] equipment failure, act of God,
internal misunderstanding,[4] etc. "Accidental" escalation does not in-
clude any escalation begun as a result of a mistaken belief by the

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[4]The adjective "internal" is intended to imply something under theo-
retical control and to exclude escalations that occur because of mistakes
or misunderstandings in interpreting the intentions of the enemy. Unless
they are the result of "trivial" misinterpretations or technical failures,
the latter escalations are to be considered escalation by miscalculation,
rather than by accident.

escalator that he could achieve more of a success than was in fact pos-
sible: this would be called escalation by miscalculation and is a case
of deliberate escalation as discussed below.

We should note that there is an inherent problem of causation in the
notion of accidental escalation. Since accidental escalation focuses on
a triggering incident, it raises the question of how important the role of
the "trigger" must be in relationship to other factors causing the escala-
tion. It is clear that the same triggering incident could cause an esca-
lation in one situation and not in another. The definition would seem to
depend upon the importance of the triggering incident within the situation
in which it is sufficient to cause escalation.

(The next three terms, "inadvertent," "unintended," and "unpremedi-
tated," are synonyms, but with slightly different connotations.) The term
"inadvertent" connotes mischance--almost frivolity; it is close in mean-
ing to the term "accidental." The term "unintended" suggests a frustra-
tion of the wishes of the nation which is escalating, and the term "unpre-
meditated" connotes a failure of planning.

One of the advantages (or disadvantages) of the phrase "unintended
escalation" is that it draws attention to the ambiguities inherent in try-
ing to describe intentions. In most escalations described as unintended,
it would be true that at some point in the escalation one or both sides
would have intended to escalate. (It is very hard to think of a situation
in which escalation could take place for a significant period wholly with-
out intention.) Nevertheless, we define "unintended" escalation as one in
which there is no original determination to escalate and a chain of cir-
cumstances or of unintended events causes one or both sides to change their
original intention. The situation in which this ambiguity is most apparent
is when one side provokes or threatens the other in the mistaken belief
that this can be done without reaction: there is neither the intention
nor the expectation of causing a serious confrontation. It must be added,
however, that when a very large risk is deliberately taken, it is reason-
able to attribute the responsibility for the escalation which results (in
law, the usual rule is that one "intends" the probable consequences of
one's actions). Neither "unpremeditated" nor "inadvertent" has this de-
gree of ambiguity, and they may be preferable terms.

All accidental escalations are inadvertent, unintended, and unpre-
meditated, although these latter are not always accidental. Accidental
escalations may include catalytic escalations: escalations started as
a result of the actions of a third country which is not one of the pri-
mary participants--although if the third country's acts are deliberate,
the escalation cannot be considered accidental. If the third country's
acts are the result of accident, the escalation would be both accidental
and catalytic.

The general category of accidental, inadvertent, unintended, and un-
premeditated escalations will normally include any escalation that is
caused by a chain of "self-fulfilling prophecies" being set into motion,
so long as the chain does not include a conscious decision to escalate
made at a time when the intense confrontation could still be averted--

when a clear opportunity to halt the process was presented. A self-ful-
filling prophecy could occur as follows: one side's temporizing action
is observed by the other side, misinterpreted as being aggressive rather
than defensive, thus causing the other side also to make some temporizing
and defensive move. This second defensive move could in turn be misread
by the original side as confirming its suspicions or fears. Under some
conditions it is possible for reactions and "signals" by both sides thus
to multiply until a point of eruption is reached without either side's
decision-makers making a conscious decision to escalate.

Deliberate, Intentional, and Premeditated Escalations

The term "deliberate" connotes a thoughtful or conscious action, and
"premeditated" has a connotation of one planned or plotted. All three
terms indicate the existence of a responsible decision, but the term
"intended" (intentional) emphasizes it.

A "pre·entive" escalation is one form of deliberate, intentional,
premeditated escalation, carried out because it is believed to be the
least undesirable alternative available. It is an escalation instigated
for prudential reasons: presumably, to prevent something worse.

A "pre-emptive" escalation may also be deliberate, intended and pre-
meditated, even though it may be the result of a rushed decision. It is
an escalation made because of a belief that one must initiate a military
conflict, or act to enlarge it, and so gain the advantages to be obtained
by first action. Such advantages may include: (1) a superior psychologi-
cal, moral, political, or physical position; (2) the preventing of an op-
ponent's escalation by causing confusion and fear or by setting a high
threshold; (3) an advantage in subsequent bargaining or tactical maneuver,
the side which has initiated possibly being able, by its tactics, to de-
termine or strongly affect the subsequent cou·se of the escalation because
it has chosen the arena and the issues and is free in directing its ini-
tial pressure among the various opponents and neutrals--and, of course,
because it has seized a psychological and timing advantage; and finally,
(4) the pre-emptive escalator may enjoy an advantage of having avoided a
defensive status. (In the opinion of some decision-makers this last mo-
tive might justify a pre-emption that was, from all other points of view,
disadvantageous.)

A pre-emptive escalation may also be inadvertent, if the events which
led up to the decision had a large element of inadvertence in them which
played dominating or immediate roles in provoking the decision to pre-empt.

Counterescalation

Counterescalation is an escalatory action which tries to answer, re-
dress, compensate for, negate, or rebut a prior escalation. The counter-
escalations in which the United States has engaged during the Cold War
have generally been of a restorative nature. This is to say they were
chiefly made to restore that which had been altered by a preceding esca-
lation. The restoration sought may be geographical in character, it may

involve the power relationship previously existing between the rival
states,[5] or it may concern the morale, respect, or prestige believed to
have been eroded by the previous escalatory action.

In the Korean conflict, before the truce line now in force was agreed
upon, the counterescalatory action of the United States might have been de-
scribed as having a restorative-plus character. This is to say that after
the United States had restored the condition which had been altered by the
invasion of South Korea, it proceeded to attempt to do more--to liberate
North Korea.[6] To take another instance, the United States may have con-
sciously eschewed making a restorative-plus counterescalation out of its
response to the Soviet escalation; to have invaded Cuba and deposed the
Castro regime would have been such an action.

If counterescalations are made merely to restore that which has been
altered by a previous escalation, the argument may be made that counter-
escalation is nothing more than a rigid maintenance of the status quo.
And to continue this policy, it might be said, would condemn one to an
unchanging international status. However, what is done by restorative
counterescalation is not an across-the-board restoration, but rather a
restoration of the status quo ante in certain selected areas: in terri-
tory, power relationships, prestige, or the like. Thus a policy of coun-
terescalation may be followed, not to freeze an entire international po-
litical and economic system, but to freeze that part of the system whose
stabilization permits the escalatee to exercise free choice and action in
other areas.[7] Counterescalation can also be considered as an attempt at
equity in international relations, in that all parties concerned may be
made to feel that there are appropriate challenges and responses. We would
call such an intentional policy "reciprocal escalation" or "reprisal."

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[5]The counterescalations made during the October-November 1962 Cuban
Crisis were expressly made to restore the strategic power relationship
which was altered by the placement of Soviet jet bombers and missiles
within range of the continental United States. However, the relatively
resolute action of the U.S. and the relatively cautious action of the
Soviet Union may have had the result of changing estimates of how each
side may be likely to act in future crises. To the extent that this al-
teration in opinion may significantly alter the two states' future poli-
cies and estimates, the relative position of the two nations may have been
changed, even if, formally, the status quo ante was restored.

[6]At this point, with American forces approaching the border of Man-
churia, the Chinese may have viewed what this study would classify as a
restorative-plus counterescalation as an escalation. If this in fact
happened, the Chinese entry into the Korean conflict could then be de-
scribed as a counterescalation which sought, at a minimum, to restore
North Korea to the Communist bloc.

[7]But see discussion on "conservative" (i.e., passive, familiar, de-
fensive, status quo, loss-minimizing, uncertainty-reducing) behavior in
the Hudson Institute Crisis Report, Chapter V, pages 176-181.

Reasons for Over- and Under-Responding

One may argue that to respond to escalations in a reciprocal fashion--
i.e., to negate an escalation, to match it, or to take reprisal action es-
sentially of the same degree of violence and involving similar cost to the
opponent--is not always the preferred response. Sometimes it is better to
"jump the ante." Then the nation which initiated escalation is rapidly
made aware of what appears to be a deep commitment of its opponent. An
over-responsive act can work to create or validate belief in the enemy
about one's own resolution.[8]

On the other hand one may occasionally wish to under-reciprocate--
to escalate a lesser amount than the provocation seems to warrant. This
would be reasonable when a reciprocal-minus escalation was punishing
enough to teach a lesson, while sufficiently equitable and firm to dis-
courage further provocation by the other side. The counterescalator may
feel that thus rapidly to end a tense situation is safer than a gradually
worsening crisis in which several rounds of escalation and counterescala-
tion may be expected. We suggested (pages 107 to 108) that such recipro-
cal-minus escalation tactics might be part of a Controlled Response stra-
tegy for Nth countries. The question is one of the most effective tactic
in each particular situation.

There are problems with both these "reciprocal-minus" and "reciprocal-
plus" escalations. The defensive attitude that reciprocal-minus both ex-
emplifies and reinforces may discourage the defender and encourage the op-
ponent, while the reciprocal-plus counterescalation may frighten, confuse,
or demoralize the opponent--or create, through uncertainties or fear, the
conditions in which inadvertent or unintended escalation may take place,
and in which the counterescalator may lose the advantage to a more resolute
opponent.

Among the arguments against reciprocal-plus counterescalation are
these:

1. There is a danger that the escalator may fail to comprehend
   the seriousness of the situation, i.e., fail to understand

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[8]Of course, over-responsive counterescalations are difficult for an
alliance like NATO--particularly if the opponent deliberately emphasizes
divisive tactics. In such an alliance the leader must look "prudent and
responsible" to the most "prudent and responsible" member (i.e., if the
alliance requires unanimity it is the "prudent" and "responsible" rather
than the "bold" and "decisive" that make policy). There are limits, how-
ever, to escalation as a divisive influence. Intense crises are often a
unifying influence and in any case lead to streamlined decision-making as
the alliance leader assumes responsibility to himself. Furthermore, the
aftereffects of such non-consultative actions by alliance leaders are
usually less serious than might be expected, alliance members often
acknowledging need for speed and decisiveness in an emergency. See Crisis
Report, pages 198-202 for more discussion of this point.

that there is a diminished margin of safety. Should this
occur, subsequent rounds of escalation could quickly erupt.

2. The escalation might erupt directly.

3. Such a reciprocal-plus response might provoke or trigger pre-
emptive overescalation by the opponent. At the extreme, if
X makes an over-responsive counterescalation to Y's initial
escalation, the latter may view X as so dangerous and reck-
less that a pre-emptive disarming attack (if one is feasible)
is required.

In general the danger of eruption is much affected by the vulnera-
bility of each side to the other's disarming attacks, and by the strate-
gic equation and the degree of significant strategic superiority that
one side or the other may have. It is by now a familiar argument (although
a disputed one) that the firmer the balance of terror at the upper rungs
of the escalation ladder, the freer opponents may feel to escalate in the
lower rungs of the ladder--because they may believe that they risk neither
pre-emption nor eruption.

Escalation Adequacy and Escalation Dominance

However, it is sometimes not realized that even though both sides
have very high levels of deterrence, asymmetries in the strategic equa-
tion may still have an important effect on the lower rungs of the ladder.
For an example let us contrast two situations. Imagine first that two
sides have reasonably firm deterrents of the multi-stable sort. (Both
sides have NCF strategies.) As we discussed in the P-Q example, in such
a balance the side that attacks first has a significant advantage, so
that there is some pressure to pre-empt, but the pressure is not over-
whelming because the second side can still have the capability to inflict,
say, thirty million casualties. However, if it does this, the first side
will then retaliate by destroying the second side's society. This means
if the first side pre-empts with a constrained disarming attack it might
hope to deter the defender by intimidating his response--threatening him
with all-out annihilation if he makes the all-out retaliation that it is
within his power to make. However, even if it is felt that the opponent
is prudent enough not to retaliate in such a fashion as to bring suicidal
consequences, one might still not be willing to rely on this belief; one
still would be likely to be deterred.

Let us take a different case in which both sides could in a "malevo-
lent" first strike destroy each other's society but only side A, in an
all-out retaliation, can still destroy side B, while side B could only
destroy ten million of side A's inhabitants in a retaliatory strike. Now
side A can say to side B, "If worse comes to worst and you strike me,
you will, depending on the character of your first strike, be defeated
or annihilated. If I strike you first, I will either be hurt badly but
still victorious, or I may be victorious and almost unharmed, depending
on how well my postattack blackmail works. If the war is inadvertent,
then depending on circumstances, the results may still be very asymmetric.

Therefore there is no possibility, if this goes to the limit, of your coming out well, while there are a great many possibilities for my coming out well, or reasonably well. We both know this, and while neither one of us is willing to go to the limit, I am much less unwilling than you are. You must take account of this fact."

Even if it were not true that A were more willing to go to the limit than B, he would still feel that his superior posture entitled him to be more willing. It might seem to him wrong for B not to pay something for the asymmetry of the posture, and B is likely to feel the same influence, irrational though it may be.

The effect of such a psychological dominance could be even stronger than has been indicated--working in fact when there is no objective reason for it to work. For example, one can imagine a situation in which the forces on both sides were completely invulnerable and A could overkill B by a factor of 20 while B could only overkill A by a factor of 2. The overkill, of course, is irrelevant, so that the two sides are effectively equal. A would still have some psychological advantage in an escalation situation because people are unused to dealing realistically with the overkill concept. A might still seem five times stronger than B, and many on both sides would feel that he was entitled to get something because of his extra strength. And in escalation situations feeling entitled to get something might be almost as significant as being entitled.

If a nation has an adequate or superior ability to bargain, negotiate, or to withstand the strains of escalation in situations that are current or threatened, we will say that the nation possesses escalation adequacy. The qualification "adequate" means that one need not necessarily aim for superiority (escalation dominance) but that the prevention of a disastrous inferiority may be sufficient. (Insofar as ACWS's affect escalation dominance, all the Soviets seem to think they need is to prevent such a disastrous inadequacy. The situation is not symmetric. As we pointed out in Chapter VII, we want to keep closed doors that the Soviets have no current intention of opening. For that reason we may wish to go for NCF--simply because it may give us some escalation dominance and the Soviets may not be willing to go to great efforts to prevent us from attaining this capability.) Thus the phrase "satisfactory level of escalation adequacy" should be understood as including the possibility that a negative or inferior level may still be held to be high enough to be satisfactory, or that a seeming physical superiority may not be enough--depending on the circumstances and characteristics (i.e., depending on who, whom, alternatives, situations, and why).

This notion of escalation adequacy is best understood by referring to the kind of capabilities that are required to move up or down on the escalation ladder. One aspect of adequacy would result from having access, if there is a requirement for it, to more rungs of the escalation ladder than are available to the opponent. (Access here implies some capability to move into and operate effectively in the area of operations defined under the new rung.) In such a case there could exist a capability not only to intensify the escalation process, if it were important to do so,

but also a capability to de-escalate or moderate the level of violence in
an appropriate way. Thus, while one may be challenged at the upper levels,
it is clearly important not to become locked in at a level of conflict
which may turn out to be inappropriate to the intentions and objectives of
both sides. It is also important to note that while one side may have an
objective capability for escalation adequacy (for example, in terms of
equipment), it may turn out that this capability could be defeated or de-
graded by the opponent's resolve, commitment, or tactics.

It should also be noticed that seemingly stable deterrence may, if
exploited by one of the opponents, lead to destabilization. That is, un-
der the protective influence of the balance of terror the number of esca-
lations may be so increased that the over-all probability of eruption or
escalation to all-out war is increased, even though the possibility of
eruption of any particular escalation might be decreased.

Rationality-of-Irrationality and Committal Strategies

The term "Rationality-of-Irrationality" describes a class of bargain-
ing or negotiating tactics or escalation situations whose common charac-
teristic is that there is a rational advantage to be gained from irrational
conduct or from the expectation of irrational conduct.

In a deterrence context, Rationality-of-Irrationality usually refers
to a current rationality of planning future irrationality. Sometimes,
however, Rationality-of-Irrationality means the present rational advan-
tage of present irrational behavior. Thus, if one is trying to buy a
valuable object at a low price, and there are no other prospective buyers,
one is more likely to succeed if one seems too stupid to realize the real
value of the object, and if one can communicate this "stupidity" to the
seller. More subtle and sophisticated forms of this kind of Rationality-
of-Irrationality are very common.

Rationality-of-Irrationality plays an important part in deterrence.
For example, in most deterrent situations, once deterrence has failed, it
is irrational to carry through the previously made warnings or threats of
retaliation since that action will produce an absolute or net loss to the
retaliator. Thus the threat of retaliation in order to be believable
must depend upon the potential irrationality of the retaliator. There
are at least three basic kinds of "irrationality" which are used to en-
hance deterrence--as well as other Rationality-of-Irrationality tactics.
One is the expectation of real human irrationality: that is, the possi-
bility that decision-makers will act from such "irrational" motives as
outraged honor, shock, rage, vengeance, confusion, or stupidity. The
second "irrationality" is an arrangement that prevents rational decision-
makers from wholly controlling the system: if the system is not likely
to be controlled, then rationality cannot be expected from it. Finally,
rationality may at least be degraded or reduced by the introduction of
special factors which change the calculations in certain situations. The
paradigm of this is a bargaining situation in which one of the bargainers
unconditionally establishes a penalty against himself if he pays a high
price which it might otherwise be reasonable for him to pay. If enough

such additional values are created which will be served by the activation
of threats or warnings, then it can be made "rational" to carry them out,
even if--in the absence of the additional reasons--it would be "irrational"
actually to carry out a given threat. All of these techniques for commit-
ting oneself may be useful.

A Committal Strategy is a strategy which involves some element of
more or less irrevocable commitment to a contingent action. If it is
reasonable or advantageous to make the commitment, but irrational in the
absence of the commitment to carry out such action if the contingency oc-
curs, then such a strategy is an expression of Rationality-of-Irrationality.
However, not all Committal Strategies are examples of Rationality-of-Irra-
tionality. It may be irrational to make the commitment itself; or it may
not be very irrational to carry it out. Committal Strategies are some-
times called Resolution Strategies, but this is poor terminology because
this term is too easily confused with such a term as "War of Resolution"--
a quite different thing.

Pyrrhic Escalations

Since escalation confrontations are not zero sum games, both sides
can lose (or both sides can gain). Consider a non-zero sum form of poker:
imagine two poker players who are bluffing one another in a long sequence
of betting and raising. As the pot grows larger and larger, the players
find themselves more and more reluctant not to meet the other's bets--
each extra risk seeming proportionately small in comparison with the chance
for a very large gain. Neither player is really willing to pass and have
the sequence of raises terminate because each feels he might bluff the
other out. The hope of bluffing, of course, becomes smaller as the betting
continues, but the larger pot compensates to some extent for the smaller
hope. Eventually, one side or the other will win. But to gain a better
analogy for "Pyrrhic Escalation," imagine that the house takes a growing
percentage of the pot as the pot increases. When the pot passes a certain
amount, the house will take more than half, so that even the winner will
lose. Nevertheless, he may still be willing to add more money in order to
recover that fraction of his bet which he may still win. The possibility
of a Pyrrhic Escalation is always present in an age of nuclear weapons and
balances of terror, but it is not unique to this age. World War I is al-
most a classic example of Pyrrhic Escalation, where each side would have
been better surrendering in 1914 than accepting the victory that it could
get in 1918. But at any particular point, it seemed to the warring na-
tions better to win than to lose, and it therefore made a kind of sense
to invest increasing amounts of blood and treasure in the effort.

It must be noted that an initial success resulting from escalatory
tactics could, in the long run, turn out to be strategic failure. An ob-
vious example of such a Pyrrhic Escalation would be a situation in which
a nation, as a direct result of a tactical defeat, tripled its defense
budget and established an alliance against its opponent. Under these al-
tered conditions the immediate practical advantage achieved by the initial
victor might eventually be changed into a strategic disadvantage.

One may attempt to limit one's losses by having an escalation limit--
that is, by explicitly setting a limit above which one will not go. One
would prefer conceding the contest to exceeding the limit. This does not
mean that the other side gets away free since he has to pay a "price"--
whatever it costs to exceed the escalation limit in order to "win" the
escalation. It may be possible to make this price quite high and still
limit one's commitment. Indeed an Nth country could continue some high
degree of escalation adequacy with a pre-emptive or preventive accommoda-
tion policy by using the controlled response strategy suggested on page 107
and yet putting an upper limit on the destruction to be wreaked.

Committal and Acquisition and Denial Values

In trying to estimate the strength of an opponents commitment, the
possibility of a compromise solution on the one hand or a Pyrrhic Esca-
lation on the other, it is often of value to be able to estimate one's
own as well as one's opponents acquisition and denial values. Those ob-
jectives calculated to carry a high acquisition value for the potential
escalator but a low denial value for the potential escalatee would seem-
ingly be objectives which could rationally be sought by escalatory tactics,
and indeed one could imagine two opponents agreeing on techniques designed
to improve the accuracy of such assessments.[9] Conversely, those objectives
upon which the opponent is believed to place high denial value, and upon
which the escalator places low acquisition value, would normally be objec-
tives for which escalation would be a poor tactic.

The situation is considerably altered when the potential escalator
places a high acquisitive value on something which has, for the potential
escalatee, a high denial value. Berlin is an instance of this situation.
If both sides understand the mutual high worth of the contested objective
they may both be hesitant to commence escalatory activity at all. The
"Don't-Rock-the-Boat" threshold may be significantly raised because of a
feeling on both sides that crossing this threshold will not be decisive
and is likely to be risky: that it is better to content oneself with
probes in the Sub-Crisis area.

It is easy to see why this is so in such a situation: in other times
nations have fought over highly valued goals in a manner which produced
victors according to which of the contestants was the stronger. Today the
nation which is the military victor--the one which has finally destroyed
the enemy's capability to resist on the battlefield--may have only achieved
a Pyrrhic victory due to the loss, or impending loss, of its population,
and such a possibility restrains nations which, under other conditions,
might have pursued their objectives with brute force. As a consequence
there can come to be a premium upon adroit escalation to stark confronta-
tions. But we now exist in the paradoxical situation that when both sides

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[9]See _Crisis Report_, section on Improved Techniques of Negotiation
as an Arms Control Measure (pp. 280-285) for a discussion of this pos-
sibility.

strongly desire victory, and both sides know it, the possibility of only
Pyrrhic victories is so high that there is a strong tendency completely
to avoid the confrontation. And the fact that, as was discussed in the
last chapter, even an eruption is likely to be settled by negotiation
further limits the potential gains and therefore the motivation to try a
contest of will and resolve.

If, nevertheless, two nations hold high acquisition and denial values
of a mutually opposed character, are aware of this, and yet still employ
escalatory tactics, such activity would be likely to be carried out in a
very careful and gradual manner with very little bridge-burning and with
serious effort to prevent the building up of a situation where action more
costly than the objective could reasonably occur. In such a situation a
careful escalation would likely start with a probing of the opponent by
escalations of only a moderately provocative level. Should reciprocal,
or greater, response to the escalatory probe be encountered, the original
estimate might be assumed to have been valid. The whole matter might then
be called off and the situation would return to a lower level of tension,
with the escalator either abandoning his objective or pursuing it by other
means.[10]

But paradoxically the fact that only Pyrrhic victories are likely and
that it is better for the escalator not to start can be exploited. Both
sides will be extra fearful of the mutual catastrophe, and if one side still
"recklessly" escalates, the opposition may collapse in panic. The uncover-
ing of an opponent's weakness, or a hint of his vacillation, might at this
point clinch the argument that the contest should be driven to high stakes.

It can be seen from the above that there is almost always great value
in convincing the other side that one is more committed than one actually
is. And there is relatively little disutility to misinforming the other
side in this way (unless one forces the opponent into a pre-emptive strike).
For this reason almost any two nations in a confrontation will attempt to
exaggerate their commitment. A problem, however, is that exaggerations may
unintentionally increase commitment because exaggeration invests the exist-
ing commitment with additional prestige and precedent values. Therefore,
while it is almost always a good idea, at least for escalation purposes,
to indicate to the other side that one is more committed than one really

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[10]We have already remarked that such tactics may be difficult for an
alliance. The problem is that displays of "prudence and responsibility"
may in many circumstances encourage an opponent to probe further. But in
a tense crisis the relationships among the members of an alliance change,
and there will often be a thrusting of leadership upon the principal mem-
ber. While those allies who have sufficient power may normally be granted
great concessions, in an intense crisis they may be by-passed since the
political cost of clearing policies with them may be less than the cost
of delay under conditions of increased urgency. These political costs
are even less than they would otherwise have been because these by-passed
actors realize the problems faced by the centralized leadership and make
concessions to them. (See Crisis Report, pp. 181-183.)

is, it may or may not be a good idea to use tactics which do this most
persuasively if inadvertently these tactics increase the commitment. One
assumes, of course, in this discussion, a deterrent good enough to pre-
vent the other side's erupting to the upper rungs as the only alternative
to losing the objective of the escalation struggle. Presumably, the is-
sues are so momentous that such phrases as "good enough" deterrence imply
a substantial margin for insurance, making due allowance for any "person-
ality" quirks or instabilities the other side may have.

The type of commitment present may have important effects. A com-
mitment sustained by fanaticism or political or ideological Messianism
could generate different problems than a commitment based upon a realis-
tic analysis of a nation's long-term national goals in terms of political
and physical possibilities--which in turn is different from a commitment
based on rhetoric or humbug. The latter two would seem more likely to be
changed or demoralized in adverse circumstances, while the first kind of
commitment might endure despite harsh disadvantages. Whether commitment
is held by an entire nation, or is only to be found in the ruling elite,
is also important. The commitment of an elite may be eroded in a crisis
if it is out of harmony with the beliefs of a nation as a whole, or it
may be strengthened if it is less than that of the people.

How can one estimate the commitment of the opponent? This is even
more difficult than estimating denial and acquisition values, since the
latter have some degree of objectivity while commitment is essentially
subjective and may deliberately be exaggerated. Experience, of course,
provides significant clues, but can also lead to serious miscalculations.
For example, the actions of President Kennedy and his advisors during the
Bay of Pigs invasion were such that observers might reasonably have con-
cluded that American commitment in the Cuban matter was indecisive and
equivocal (even though it was not). This may have contributed to the So-
viet decision to place "offensive" missiles and aircraft in Cuba. Mr.
Kennedy's speech of November 12, 1962, with its frank, almost brutal,
statements, and his subsequent actions, indicated, on the other hand, a
very high degree of commitment indeed.

Thus public statements provide evidence of commitment. The strongest
are those which in some manner create commitment--that is, which obligate
a nation to an action which, if not taken under the specified circumstances,
would seriously embarrass or harm the nation. Such statements may pledge
the honor of a people or the prestige of a leader. The prestige of the
United States and of several American presidents has been committed to the
freedom of West Berlin, for example, and not only prestige but much of the
carefully built and maintained American alliance structure would suffer ex-
tensively if the United States failed to fulfill its stated obligations to
West Berlin.

Still another way to estimate commitment is to examine the character of
a nation's leaders. This can be a misleading enterprise, not least because
of calculated public actions devised to convey a certain image to the oppo-
nent. During instances when a national leader is, so to speak, on stage, he
can act a part calculated to enhance his nation's bargaining position. An

appearance of unreasonable toughness can destroy the possibilities of bar-
gaining, of course, just as an appearance of reasonableness or of concilia-
tion can produce a false impression of timidity or irresolution. The same
can occur in private meetings among leaders.

The traditional method of estimating a nation's commitment is to ask
whether the commitment makes sense in relation to the apparent national
interests of the nation. One danger here, of course, is that of seeing
the opponent as a mirror image and projecting upon him one's own values.
Nevertheless, this method of assessment can be carried out with some de-
gree of objectivity and is fundamental to a judgment of enemy intentions.
But estimates of the opponent's acquisition values can also be very mis-
leading because of the effects of bluffing, Rationality-of-Irrationality--
and even misunderstandings by the opponent himself: he may think he con-
siders a situation vital only to discover under pressure that he re-evalua-
ted--or vice versa. Mr. Acheson, for example, undoubtedly had good reason
to say that South Korea was of little concern to the security of the United
States when he made his famous speech on America's Asian interests in 1950,
but when there came an invasion by the North Koreans, the United States'
valuation of the Korean situation abruptly altered.

Thus, while governments make statements of the worth they attach to
the acquisition or denial of certain goals, such statements at best only
indicate broad terms of value and may intentionally be couched in ambig-
uous terms--or they may even be deliberately misleading. The Eisenhower
Administration's statement that the Chinese Offshore Islands were of suf-
ficient worth to be defended was deliberately confused by a qualification
that the islands would be defended only if an attack on them was thought,
by the United States, to be part of a larger venture against Taiwan. A
further ambiguity was added in that it was not made clear the types of
weapons that would be used in the defense, and there was a general impres-
sion that the United States had both nuclear and conventional weapons pre-
pared for use in the general area of the Offshore Islands. What the United
States really said was that the Offshore Islands were of some considerable
worth but that the exact value would not be divulged unless the Chinese
Communists cared to find this out by launching an attack; i.e., we warned
rather than threatened.

Premier Khrushchev has supplied another example of the ambiguity to
be found in "worth" statements. He has, on several occasions, delivered
ultimatums concerning the Berlin problem. None have been put into effect.
There seems little doubt that altering West Berlin's status is of consid-
erable worth to the Russians. But how much it is worth, in terms of men
and material to be risked, is a much more difficult question to answer.

There are other pitfalls in attempting to analyze the relationship
between the national interests of the nation involved and the objectives
to be acquired or denied. One must first calculate the national interests
of the opponent, in itself, a difficult task. Second, one must consider
the value and national interests as the leaders of the opposing nation
would view it. The danger is that the analyst, not a product of the milieu
which produced the opponent's leaders, may fail to make the same value

assessment as those leaders. Confirmation may be sought by observing the
opponent's behavior. This too can be misleading, since there is a tend-
ency to act as well as speak in ways that cause one's opponent to over-
estimate one's committal--and an easy way to do this is to persuade him
that one overestimates values. This is the place where one can only trust
the politician and the political analysts--the implications of who, whom,
and why are not yet subject to careful quantitative analysis, even though
such analysis may lead to useful data.

Capabilities, Options, and Thresholds

Another variable in escalatory situations is the capacity to bring
to bear, or credibly to threaten, physical force in various forms in sup-
port of escalatory activity. For the purposes of this analysis such capa-
bilities can be divided into two primary categories--the ones that are used
in the escalation, and the ones that are threatened if the escalation should
erupt or increase. Both of these are Level Five questions and are discussed
in accompanying reports, particularly Escalation and Its Strategic Context
by Herman Kahn, Soviet Attitudes Towards the Use of Force by Edmund O. Still-
man, and the Alternative Central War Postures and Tactics Report. Actually,
as discussed in the above reports, equally as important as the capabilities
are the attitudes towards the various firebreaks and thresholds. Since the
discussion in these other reports is relatively complete we will simply
assume that the reader is familiar with the material in them and terminate
this technical discussion of Level Four with a "sketchy" synthesis of es-
calation, controlled war and war termination.

Escalation, Controlled War and War Termination

We will be considering here how to manipulate the regions between the
following six thresholds of the escalation ladder on pages 22 and 23:

1. Don't rock the boat
2. Nuclear war is unthinkable
3. No nuclear use
4. Central sanctuary
5. Central war
6. City destruction

While one can argue that all of the above thresholds are significant,
clearly their strength and reliability will vary among other things accord-
ing to who, whom, alternatives and situations--particularly as to whether
or not one approaches the threshold slowly and so has a chance to establish
it,or erupts over it possibly without even knowing it was there. These
issues are discussed elsewhere.

Between thresholds we have seven groups of options which we have called:

1. Subcrisis maneuvering ⎫
2. Traditional crises   ⎬ Lower rungs
3. Intense crises   ⎭
4. Bizarre crises   ⎫ Middle rungs
5. Twilight zone hostilities ⎬
6. Military central wars   ⎬ Upper rungs
7. Civilian central wars   ⎭

However, for our current purposes, we would like to talk about three rough (overlapping) regions: the lower rungs, the middle rungs and the upper rungs of the escalation ladder, as indicated above. At the lower rungs, which we think of as involving the first two or three thresholds, we would have choices among "normal" options as indicated below:

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Intense
Crises
{
18. Spectacular show or demonstration of force
17. Limited evacuation ($\sim 20\%$)
16. Nuclear "ultimatums"
15. Barely nuclear war
14. Declaration of limited conventional war
13. Compound counterescalation
12. Large conventional war (or actions)
11. Super-ready status
10. Provocative breaking off of diplomatic relations
}

(Nuclear War is Unthinkable Threshold)

Traditional
Crises
{
9. Dramatic military confrontations
8. Harassing acts of violence
7. "Legal" harassment
6. Significant mobilization
5. Show of force
4. Hardening of positions--confrontation of wills
}

(Don't Rock the Boat Threshold)

Subcrisis
Maneuvering
{
3. Congressional resolution or solemn declaration
2. Political, economic, and diplomatic gestures
1. Ostensible crisis
}

We are here mostly using the customary language of crisis or sub-crisis and while force is always present, it tends to be more or less in the background--at least as an ultimate sanction. The issue is more political than military. (This is true even if there is a limited war, since the political limits of the limited war are as likely to determine the outcome as strictly military considerations.) Typical bargaining tactics use themes such as indicated below.

Typical Political Bargaining Tactics for Lower Rungs

1. It is in your interest
2. My last demand
3. One of us has to be reasonable
4. My partner won't let me
5. Only you can reform me
6. Put yourself in my place
7. Let's meet halfway
8. I am too X to give in[11]
9. Let's not complicate the issue
10. Let's not oversimplify the issue

In other words, the appeal is as much to contractual, familial and agonistic considerations as it is to coercion. The prospect of coercion, of course, helps motivate each side to examine and weigh more carefully and empathetically these other considerations. But it is still as likely to be these other considerations which determine the bargain that is reached as simple direct calculations of the balance of forces.

The above is all very familiar to any newspaper reader. However, if we ever get past the second threshold--if we get to the third, fourth, or fifth thresholds--we are in the middle rungs of the escalation ladder and things are somewhat different. The options now available are as indicated below:

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Twilight Zone of Hostilities
{
31. Reciprocal reprisals
30. Complete evacuation ($\sim$95%)
29. Exemplary attacks on population
28. Exemplary attacks against property
27. Exemplary attack on military
26. Demonstration attack on zone of interior
}

(Central Sanctuary Threshold)

Bizarre Crises
{
25. Evacuation ($\sim$70%)
24. Unusual, provocative, and significant countermeasures
23. Local nuclear war--military
22. Declaration of limited nuclear war
21. Local nuclear war--exemplary
}

(No Nuclear Use Threshold)

Intense Crises
{
20. "Peaceful" world-wide embargo or blockade
19. "Justifiable" counterforce attack
18. Spectacular show or demonstration of force
17. Limited evacuation ($\sim$20%)
16. Nuclear "ultimatums"
15. Barely nuclear war
14. Declaration of limited conventional war
13. Compound counterescalation
12. Large conventional war (or actions)
11. Super-ready status
10. Provocative breaking off of diplomatic relations
}

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[11]X can be strong, weak, stupid, smart, stubborn, flexible, etc.

We deliberately put strange names on the kinds of crises we are now considering: intense, bizarre, twilight zone hostilities (we used to call this last Nuclear Gunboat Diplomacy, but it may be that this term is misleading). We are now in the region which is dominated by "sophisticated" deterrence theory. While it is often felt that who and whom are not crucially important here as long as both sides are prudential, who and whom may still turn out to be most important if one or both are not so prudential. But it is still true that for a very large range of who's and whom's the threats, counterthreats, alternatives and situations will still tend to dominate the negotiations. Thus this is the world of P-Q analysis, with a tendency for the bargaining between P and Q to be dominated by objective calculations and threats, though not exclusively. The most important considerations are given in the P-Q bargaining chart below.

Bargaining Between P & Q

I. P's current and future threat against Q's:

    1. Society (see pages 188-190)
    2. Strategic forces
        a. Countervalue capability
        b. Counterforce capability

II. Q's current and future threat against P

III. The promises each country can make to the other:

    1. Value
    2. Credibility

IV. P's resolve against Q's resolve:

    1. Expectations, attitudes and morale
    2. Current "emotional" and objective state
    3. Strategy, tactics, and "technical" capabilities

V. Each side's calculations of potential gain vs. two-sided uncertainty

The above chart is more or less self-explanatory. It is also, to some degree, an oversimplification since all bargaining, at the upper as well as at the lower rungs of the escalation ladder, is bound to be complicated by the fact that each side's information will be different; each side may be attempting to bluff the other side, to give misleading information; there will be communication difficulties; there will be the pressure of time; there will be a play of emotions, irrationality, anger, miscalculation, bad doctrine, misapprehension, mistake, and shock. At the upper end of an escalation ladder, the effect of these is likely to be enormously intensified.

It should be clear that the national resolve we are referring to is a complex and dynamic concept. The contest of resolves will be affected by the expectations various elites and other groups have of the outcome of

the conflict. If one side feels that the other is very likely to back down, perhaps because of disunity problems, and the other side strongly doubts that the opponent is likely to give ground for this or any other reason, then the pressure on the second side to back down is indeed great.

The actual strategy, tactics, and technical capabilities, however, may appear more complicated than they really are. Consider, for instance, the example of two men bargaining over a house. The potential buyer's estimate of the seller's rock-bottom price and the seller's estimates of the buyer's estimates can be crucial. The bargaining also involves the buyer's estimate of the seller's estimate of the buyer's estimate, and so on. This seems complicated, but of course people actually in this situation intuitively estimate and keep track of these variables and many others without much difficulty.

In a war situation, one would be interested not only in the opponent's current threat but in his future threat: in how his threat will change over time as his forces attack and are attacked: for example, whether he has a minimum capability which cannot be attacked or destroyed.

Finally, we must note that the analysis of bargaining, negotiation and war termination can be made much more interesting when the strategic and tactical capabilities of each side have been spelled out in sufficient detail to score them in different confrontations (or attacks). One can then evaluate performance in these confrontations and measure the extent to which the forces contribute to various political and military purposes and objectives. This is done, to some extent, in the accompanying Central War Postures and Tactics report.

Consideration of limited or restrained nuclear war, particularly "slow-motion war" (the considered, deliberate, limited exchange of nuclear weapons) calls for almost total and complete centralized control over the situation. In addition to selective, flexible weapons systems, real-time command and control and a weapons application planning capability on the part of both contestants may be necessary to play this game without its ending in a disaster from which the nations involved--and, in some sense the world--might take decades or generations to recover. Political "control" systems are also vital to such activity, since without the power to negotiate and bargain, both with the enemy and with one's allies, the pursuit of a strategy becomes almost meaningless. Developing systems specifically for this purpose involves intense problems, however. It first of all makes slow-motion war more feasible than it now is--which may not be to anyone's advantage--or perhaps to that of one side only. A deterrent to escalation to the middle rungs will, in any event, have been removed. Assuming, for the moment, that a command and control system capable of handling high-level crises is built, what, ideally, would it be like?[12]

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[12] As already mentioned such special systems need not necessarily be hard, for if the attacking nation really believes that the other's fall-back mode is to salvo (even a small, selected salvo), the last target the attacker may want to hit is this postattack system. If, however, the a attacker feels his opponent really is constrained from mounting a salvo, and he can take out the command and control system with an attack, he may target the system.

First of all, it must either be the master system for the entire alliance's
thermonuclear striking force or a coordinating system with the capability
of rapidly providing choices and gathering "votes" of allies--if indeed
allies will have votes in this game, for the reverse is not necessarily
beyond contemplation. Next, this system must have the capability to be
used in negotiations with the enemy. This would require it to gather and
transmit data from one side to another, and among friendly decision-makers
and staffs. The system would be employed to evaluate offers and counter-
offers in relation to objectives and to possible peace settlements.[13]

Finally we come to the upper rungs of the escalation ladder, the "un-
thinkable" central war rungs. The options that are now being considered
are as given below:

Civilian Central Wars	44.	Some other kind of general war
	43.	Spasm war
	42.	Civilian devastation attack
	41.	Augmented disarming attack
	40.	Countervalue salvo
	39.	Slow-motion countercity war

(City Destruction Threshold)

Military Central Wars	38.	Unmodified counterforce attack
	37.	Counterforce-with-avoidance attack
	36.	Constrained disarming attack
	35.	Constrained force reduction salvo
	34.	Slow-motion counterforce war
	33.	Slow-motion counter-"property" war
	32.	Formal declaration of "general" war

(Central War Threshold)

Twilight Zone Hostilities	31.	Reciprocal reprisals
	30.	Complete evacuation ($\sim 95\%$)
	29.	Exemplary attacks on population
	28.	Exemplary attacks against property
	27.	Exemplary attacks on military
	26.	Demonstration attack on zone of interior

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[13]One system which has been suggested to cope with the special prob-
lems of escalation and bargaining at high levels of violence may be referred
to as a "presidential" missile force: a small number of weapons specifi-
cally designated for slow-motion warfare under the direct control of the
President. Such a system might use special capabilities to take out the
targets of a Limited Controlled War: very small CEP's, low yield, lack of
fallout. Destruct mechanisms for the warheads if they should deviate from
trajectory, superior reporting and reconnaissance systems for the Presi-
dential Missile command and control system, and excellent penetration aids
for these "one-at-a-time" strikes would be among the other desirable fea-
tures. The command and control system as well as the weapons for such a
deterrent system might be highly sophisticated. Flexibility in targeting
would be essential, particularly as Nth countries come into the picture.

Whether or not the "negotiations" will be dominated by the sort of bargain-
ing as indicated by items I, II, and III on page 305, or by just a simple
desire to call off the war, is likely to be determined by each side's cal-
culation of potential gains vs. the two-sided uncertainty issue. If one
side has a large edge and wishes the "peace treaty" to reflect this edge
and further feels he can limit the damage to himself if things gc badly
(either by physical means or by asking for and getting a "pre-emptive"
cease-fire) then the assumed calculability is likely to dominate, the un-
certainties will not swamp the perceived advantages, and bargaining is
likely to be conducted in the usual threat-counterthreat fashion, no mat-
ter what the other side wants to do--unless it is willing to acquiesce.
The advantages need not, of course, be physical. Also if both sides are
uncertain, one side may try to "steal" a victory. Under other circum-
stances the uncertainties will dominate the calculability, or at least
the estimated potential gains, and both sides may be willing to have a
cease-fire as soon as communications can be arranged under almost any
terms.

The process of bargaining, negotiation, and war termination may depend
in an important way on the history of the escalation. There are three broad
categories of war initiation which can be considered here. First, when mis-
calculation, accident, or inadvertence has played a central role. Second,
when a definite and limited political goal or objective is sought. Third,
in the extreme case, when one side may be trying to end the other's exist-
ence as a major power.

In many cases the "unintentional" eruption is probably easiest to con-
sider in this context. If both sides have the kind of stability in their
forces which permits them to hold back,and it is apparent that the risks
are greater than the stakes (the two-sided uncertainty is swamping each
side's calculation of potential gain), then the objective is just to call
off the war and the sooner the better. There is a requirement for physical
facilities which permit an interchange of messages and reassurance between
the sides. The problem of terminating the war started by miscalculation
may be more difficult. This will depend to some extent on whether the ini-
tial attack comes "out of the blue" or whether it follows a period of ten-
sion. The miscalculation which causes an attack to be launched "out of the
blue" would very likely use only those strategic forces which are on routine
alert. If the initial damage is small, and the attack is not highly coordi-
nated, then there may be some chance for terminating the war at a fairly low
level of conflict. Of course, the side which is the victim, even though it
may recognize that the opponent has miscalculated and does not wish to carry
on the war, may nevertheless make a reprisal attack. The conflict may then
end at this level. The case of a war initiated by miscalculation after a
prolonged period of tension may be more difficult to terminate, at least to
terminate at a fairly low level on the escalation ladder. In such a case
the initial attack may be fairly well coordinated and use a large part of
the strategic forces which have been brought up to alert status during the
period of tension. And even in a war started accidentally or by miscalcu-
lation, one side or the other may decide to continue or intensify the con-
flict and attempt to win decisive victory, at least in a military sense.

The problem of terminating a war in which explicit political objectives are being contested is still more difficult to consider. In this case, there is not only the problem of war termination but also of bargaining and negotiating. During the intra-war period the bargaining may take the form of verbal exchanges in which offer and counteroffer are made. However, bargaining and the negotiation may also be punctuated by attempts to show resolve and commitment, and this would very likely involve the use of weapons in one form or another.

Instead of defining effectiveness by counting the number of targets a missile force might destroy, we now define effectiveness in terms of improvement in one's bargaining position. Let us consider briefly some of the dynamic factors that would have to go into substantive studies. In any particular instance--preattack or postattack--each side has a certain threat capability: that is, it can do a certain amount of counterforce damage, a certain amount of countervalue damage, or varying combinations of these. (More counterforce damage will tend to mean less countervalue damage and vice versa.) Furthermore, as indicated by the discussion on pages 188-190, the notion of countervalue damage is complex.

The notion of counterforce damage is also complex. For example, a counterforce attack by the United States against the Soviet Union might have as an objective Soviet advance bases in the northern part of the country so as temporarily to make it difficult or impossible for Soviet short-range medium bombers to use these bases for refueling. But the Soviet Air Force could probably regroup, improvise, use aerial refueling, and otherwise recuperate its capability. Other levels of attack, in the first strike or in subsequent waves, might hinder or permanently prevent such improvisation. Damage to command and control is obviously a critical factor and yet hard to evaluate. Insofar as there are weapon carriers which are not destroyed in an attack (e.g., Polaris submarines, very hard missile sites, and mobile missiles), and which do not need operational coordination, the major effect of destroying or degrading command and control might be a delay of an eventual order to fire, elimination of some possible retargeting, and added opportunity to coerce or intimidate the enemy--but the threat of the enemy attack remains. Thus the concept of damage is a dynamic rather than a static concept: it can increase or decrease over time, by deterioration or recuperation.

When it comes to countervalue damage, a nation's decision-makers and their bargaining position will not only be affected by the number of people killed, the amount of property destroyed (and whether this property has sentimental, cultural, or other special values), and how badly the environment has already been affected. In most circumstances, a nation's leaders will be even more concerned with the enemy threat that remains, the people who may yet be killed, and the further degradation possible in the capability to recuperate or the speed with which this recuperation can be carried out. Bargaining may also be affected if some portion of the country is considered to be relatively invulnerable. Decision-makers might be greatly affected by their estimate of what would be left in an extremity: what is the ultimate threat the enemy can pose at any particular point? There is a question of the physical and political capabilities for command

and control. And finally, actual bargaining will be much affected by the
state of information about both sides, each side's estimate of the other
side's estimate and vice versa, and estimates of the effect of attempts
to bluff or otherwise to mislead.

Each side is likely to attack the enemy's morale or resolve in addi-
tion to inflicting physical damage. In a bargaining situation, the enemy's
resolution may be more vulnerable than his weapons systems. Attacks--using
techniques of political warfare--against morale and resolve could be de-
signed to frighten and deter while minimizing provocation that might lead
to the "wrong" kind of emotional or irrational response. Or one might want
so much to maximize apprehension that worries about provocation would be
secondary.

As a hypothetical example, imagine that an attacker spares the ten
largest enemy cities while destroying as many of the other cities as he is
capable of hitting. The side with only ten cities surviving might easily
be intimidated by the prospect of losing the remainder. Having lost so
much, it might feel that in such a terrible extremity these last ten cities
would be essential to its recuperation--and it would be clear that the
opponent has the capability to destroy these cities. The opponent, by
creating this situation, might actually have a stronger bargaining position--
in the most ruthless power terms--than had he concentrated on destroying
strategic forces and ignored cities. In other words, the importance of the
assets visualized as being at risk, as compared to the assets not at risk,
greatly influences the effectiveness of the enemy's threats.

Bargaining against the background of controlled reprisal is likely to
be very simple, mostly a matter of "take it or leave it." We already indi-
cated that there are, however, roughly five distinguishable classes of
peace offers which might be made in controlled war: (1) a demand for uncon-
ditional surrender; (2) a demand for great concessions but with specific
terms or guarantees; (3) a demand for cease-fire with limited conditions
imposed and specific guarantees offered, some kind of compromise offer,
probably either in quid pro quo form or with an offer to settle on some
salient compromise; (4) a concession of defeat but with a demand for guar-
antees and terms before agreement to a cease-fire; and (5) an unconditional
surrender.

One would not necessarily conduct negotiations with the prewar govern-
ment--presuming that it has survived the war; one might try to divide the
enemy by attempting negotiations with military authorities or some other
powerful group. Exactly what might be done would depend entirely on cir-
cumstances, but the possibility of the involuntary, or revolutionary,
change or disintegration of governments involved in nuclear exchanges must
be taken into account--and the possibility of influencing or exploiting
these eventualities.

The way in which the prewar crisis had begun and developed into a war
could also make a great difference in the bargaining situation: in the
process of escalation, war plans and political policies may be re-examined
and changed; in any case, decision-makers are likely to be exposed to con-
siderable strategic education, while military leaders may have important
and surprising constraints imposed on them.

It is clear that one is now at a sort of moment of truth--the moment
for the final integration of Levels One through Seven. In particular, all
of the attacks on page 197 may now be used, though the focus will presum-
ably be on I, Strategic Military (Counterforce) attacks, and on II, Civilian
(Countervalue) Devastation attacks. Which attacks are to be used are mat-
ters of opportunity and command decision.

Even though the war is being fought at a high level, there may be
abatement situations where the intensity diminishes. In such pauses, one
may wish to negotiate or at least exchange messages. At such points one
does not launch an attack simply because targets are available, and if one
does attack, one is likely to choose attacks from III and IV (on page 197)
as part of the communication-negotiation process or for other instrumental
reasons.

It is useful to have some standard forms or format to work with in
analyzing a detailed scenario of what might happen. Such forms are really
variations of Tables II and III on pages 230 and 233 respectively. However,
one may wish to use forms with more details on them on which the story can
be carried a number of steps. A standard format or worksheet for analyzing
war-fighting scenarios is presented on the following two pages. We divide
the course of the war from the beginning to the termination into phases
identified as rungs of the escalation ladder on pages 22 and 23 (thus R-36
is to denote the 36th rung of the ladder, namely a constrained disarming
attack). At the end of each phase of the war we record the state of affairs
that has been reached by that time. First we must record the actual condi-
tion of the two sides, P and Q, as measured by the civilian fatalities they
have sustained and the state of their forces. But we must also find a man-
ageable way to keep track of the bargaining positions of P and Q throughout
the war. Their bargaining positions at the end of a given phase are determined
by the foreseen outcomes of the branching alternative possible continuations
of the war from that point on. But of course it is unreasonable to hope to
follow out all possible branches to the end in full detail, so we will just
keep track of civilian deaths on certain informative branches for one or two
steps ahead.

For instance, let us take one of the standardized Alpha, Beta, or Gamma
scenarios of the introductory comments--say the Gamma I scenario on page 145.
At any particular one of the steps in that scenario there is a certain bar-
gaining position between the two sides as indicated by the P-Q bargaining
chart on page 305. The problem we have set ourselves is to go through the
steps of that scenario and further steps, at each time making calculations
which illustrate the position of each side on the P-Q bargaining chart. That
is, we wish to design a convenient worksheet for displaying and for keeping
track of the most useful information with respect to the two bargaining
positions.

These calculations of the bargaining position should take into account
the state of various civil defense preparations. For example, if we had
a program such as indicated by the chart on page 187 which shows how, with
appropriate movements, the vulnerability of the U.S. population might decline
over various periods running from six minutes to one month. These changes
in vulnerability should be recorded.

WAR-FIGHTING SCENARIO (WORKSHEET)

SCENARIO		Civilian Dead (Cumulative)	Force Posture	P civilians at risk: Additional P dead _if_ P attacks on Rung--												
				0	0	0	0	0	0	42	41	38	37	36	......	
				And Q responds on Rung--												
				42	41	38	37	36	...	42	42	42	42	42	42	...
Q provokes																
P begins to evacuate																
P completes evacuation																
P attacks R-36, missiles																
Q attacks R-38, missiles																
P attacks R-36, bombers																
Q attacks R-38, bombers																
P attacks R-38 + R-28																
. . .																
P and Q R-34																
. . .																
P and Q R-33																
. . .																
War Termination																

R-0 = Nothing
R-42 = Civilian Devastation Attack
R-41 = Augmented Disarming Attack
R-38 = Unmodified Counterforce Attack
(over)

WAR-FIGHTING SCENARIO (WORKSHEET) (Continued)

Q STATUS

Civilian Dead (Cumulative)	Force Posture	Q civilians at risk: Additional Q dead _if_ Q attacks on Rung-- 0 0 0 0 0 0 42 41 38 37 36 ... ... And P responds on Rung-- 42 41 38 37 36 ... 42 42 42 42 42 42 ...											

R-37 = Counterforce-with-Avoidance Attack
R-36 = Constrained Disarming Attack
R-34 = Slow-Motion Counterforce War
R-33 = Slow-Motion Counter-Property War
etc; see Escalation Ladder, p. 23

Rational Use of National Resources

It is part of the definition of resources that they are not in un-
limited supply. While it is possible to imagine some mineral or isotope
being so scarce that its use for military purposes becomes a crucial po-
litical objective, such instances are relatively uncommon, and the basic
national resources can usually be expressed in terms of time and money.

In the case of the nation's labor force, its technicians and scien-
tists and its armed forces, time is often also reducible to money; in the
case of the President and his advisers, time must be regarded more as an
irreducible source, at least as the government is organized at present.

Since there are thus definite political limits to the time and money
that can be spent on military objectives, it is never enough to ask of a
proposal, "Would it benefit us to adopt it?" or even "Is it effective?"--
instead the question should be put thus: "Is this so necessary, so de-
sirable, so effective, that it justifies the diversion of time and money
from other projects that are under way, or that might be initiated if
this one were not?"

The better and more reliable the answers that can be given to such
questions, the more rational can be the use of the national resources,
time and money. Efficiency, in a narrow cost-effectiveness sense, may
not always be rational. Political realities may require the use of an
inefficient system with greater political acceptability. Sacrifices in
efficiency may have to be made in order to get the project past Congress,
to avoid shocking world opinion, to avoid setting undesirable precedents,
etc. In such circumstances, the inefficient use of time, money, or other
resources turns out not to have been a waste.

In a much wider political sense, national resources can be understood
to include such things as our reputation as a "responsible" nation, both
in the sense that we do not lightly risk damage to ourselves, our allies,
or neutrals, and in the sense that we live up to our international obliga-
tions and treaties. It is immaterial for the purpose of this considera-
tion how deserved this reputation is. It is clear that in some contexts
it might benefit us to have this reputation, while in other contexts that
could be imagined, it might be to our disadvantage. The efficient use of
national resources might then include the manipulation of such intangible
factors in the most effective manner.

In the same way our geographical position, which separates us by an
ocean on each side from other major powers, might be considered a "na-
tional resource." It is easy to see how advantage might be taken of this
"resource" in the design of weapons systems, strategies, and national
postures.

Assurance and Style

This term describes a quality in official decision-making and action which--in our usage--is perhaps best defined negatively as an absence of those doubts or insecurity that may be generated either by military factors (such as the fear of eruption) or by political ones-- by uncertainty about the worth of a political cause, the merits of the dispute, the justice of the actions that are contemplated, or about the unity or perseverance that may be expected of the nation in a particular conflict.

For example, in an international bargaining situation in which one of the factors affecting decision-making on both sides is the risk of war, the differential attitude towards this risk may give a bargaining advan- tage to one side. For this purpose we are not considering the direct ef- fect of our attitude on the other side's willingness to run risks; we are considering our own side's problems--that is, our attitude toward being subjected to risks of war, with relatively passive and defensive acts by our side. The objective is to be willing to accept and endure such risks of eruption if they are thrust on us even though we might not ourselves be willing to increase or manipulate these risks voluntarily and delib- erately. Our object is to negate the gains that our opponent is trying for rather than trying for similar gains ourselves. (However, the enemy's estimate of our willingness to accept and endure risks instead of trying, if necessary at great cost, to diminish them will certainly affect his willingness to create or continue crises.)

The minimum requirement appears to be the ability to withstand nu- clear blackmail and to bargain effectively, even if this ability is not sufficient to make Escalation Adequacy possible. The problem is essen- tially non-military but it will be influenced (and could be dominated) by military factors.

Thus the following military factors could affect our assurance:

1. The perceived capability of the deterrent actually to deter the other side from excessive escalation even in desperate circumstances.

2. The stability of the balance of terror in regard to inadvertent and deliberate stresses.

3. A capability to fight, survive, and terminate a war--that is, the capability of the nation to survive war if deter- rence fails.

Thus Assurance in a crisis is affected by the subjective public es- timate of the probability of war and of the degree of disaster that war would bring. In a mathematician's language, the product of the two is, of course, the expected disutility of the war.

It is interesting to note that, strictly speaking, it is not neces- sary really to have objective capabilities in order to have Assurance.

Assurance can result from a belief, not necessarily a well-founded one,
in capabilities. This is, of course, one of the major points made by many
peace groups--particularly about measures for active and passive defenses;
they argue that such defenses are a fraud perpetrated by the government
in order to make people willing to endure a crisis. Whether this is a
fair accusation depends upon the programs actually adopted and the tactics
that are planned.

Thus the objective of Assurance is close to the attitude of assurance
in individuals: it proceeds from lack of doubt about one's strength and
the justness of one's cause, from confidence in one's endurance and one's
courage.

Assurance enables its possessor to withstand pressures: both threats
from without and internal pressures for accommodation or surrender which are
generated by fear, by bad conscience, or by the desire not to appear unreason-
able, callous, or inhumane. The concept of assurance is difficult to analyze
in its components, because assurance has a way of seeming "all of one piece."
It may be in some sense destroyed or harmed by too close an analysis.

Since assurance is thus very difficult to analyze in rational terms,
we have suggested it is best to define and analyze nonassurance. This
analysis, in turn, sheds a good deal of light on the nature of assurance.

TABLE I

Nonassurance Can Be Caused by Doubts About:

a. Justice and legitimacy of one's cause
b. Morality of means employed
c. Effectiveness of available means
d. Morale or loyalty at home
e. Public opinion abroad
f. Acceptability of immediate and latent
   risks
g. Chances of improving immediate situation
h. Long-term trend (time being on one's side)

We will comment on some elements of the table.

Justice of one's cause: This is partly a consideration of a nation's
values beyond the national interest. It is easy to see why firm beliefs,
whether nationalistic, religious, or political (Communist, national liber-
ation, crusade against evil) can serve to give assurance by removing all
doubts on this score. Thus many observers have pointed out that the inces-
sant Soviet internal peace propaganda, while far more desirable than pro-
militaristic war propaganda, is not an unalloyed blessing as compared to having
a less "bellicose" attitude on the subject. At the minimum it induces
feelings of self-righteousness and intransigence and at the maximum it may
make the Soviets want peace so badly that "they will kill us to get it."

<u>Morality of means employed</u>: This is also closely connected with Levels One to Three and we refer the reader to that discussion in Chapter IX. We shall have more to say on the subject under Political Acceptibility below.

<u>Effectiveness of available means</u>: This has moral and political components which may dwarf the "physics and engineering." We have already discussed these briefly.

Frederick the Great once said that God was on the side of the bigger battalions which is a very pretty way of characterizing the assurance given by the possession of more effective weapons. In tense confrontations such assurance does not only increase one's own bargaining power, but in addition degrades the assurance of the enemy, provided that he sees the situation in a similar light. Table II illustrates some of these relationships.

TABLE II

<u>Some Relations between Perceived and Actual Military Performance on the One Hand and Levels IV & V on the Other</u>

Quality of Our Own Military Performance In

Reality (Fighting Power)	Enemy Opinion (Deterrence)	Our Own Opinion (Assurance)	Description & Remarks
Good	Good	Good	Position of strength
Good	Good	Poor	Undue diffidence
Good	Poor	Good	"Sandbagging" in "normal life" but increases danger of deterrence failing in current "balance of terror" situation
Poor	Good	Good	Successful facade--at least as long as there is no real showdown
Poor	Good	Poor	Partially successful facade--risky because of arms race inducements or possibility of showdown
Poor	Poor	Good	Self-delusion--dangerous, often fatal, but in a balance of terror environment it may work
Good	Poor	Poor	Unsuspected strength--but bad for deterrence--thus very dangerous
Poor	Poor	Poor	Accommodation, surrender, defeat or risky rationality-of-irrationality policies

Table II is oversimplified, because deterrence depends on other factors besides enemy assessment of one's military performance, and assurance depends on other factors besides our own opinion of our military performance.

In addition to the effect of our own weapons on our own assurance and on the assurance of the enemy, there is also a direct effect that the assurance of one side has on the assurance of the other.

Morale or loyalty at home: This is closely connected with domestic political acceptability and will be discussed below.

Public opinion abroad: Not all nations are equally sensitive to this, but a feeling for a "decent respect to the opinions of mankind" is strong in the United States. We would hesitate to use even limited violence in a cause strongly disapproved of by the rest of the world, and we would similarly hesitate to use weapons condemned by the rest of the world even though we might do these things if we thought that the rest of the world largely approved. It is seen at once that this field interacts strongly with the considerations of the national interest and beyond. Aspects of this will be further discussed under Foreign Political Acceptability below.

Acceptability of immediate and latent risks: This is a matter for individual assessment, but a substantial risk of very severe damage would affect the assurance of almost any nation adversely. In the last analysis, acceptability would depend upon the nature and the probability of the risks, the available alternatives, and all the other factors which affect assurance.

The Cuban crisis is a good illustration of some of the factors discussed. American assurance was good on several counts. We were far more confident about the justice of our cause than we had been on the earlier occasion of the Bay of Pigs invasion. Partly this was due to the fact that the Russians themselves had taken an aggressive step by putting nuclear missiles into a previously nonnuclear zone in the immediate vicinity of the homeland of the United States. Moreover, the Soviet leaders had misled our administration about the exact nature of the weapons to be installed in Cuba, and President Kennedy strengthened the feeling of justice of our cause by repeatedly emphasizing that the Russians had lied to him. The morality of means employed was also in order. We had no intention of using nuclear weapons in Cuba, but announced that we would use a naval blockade to cut off the supply of nuclear warheads to the Cuban missiles, and, if accommodation was not forthcoming, that we would take Cuba, again presumably by conventional means. Compared to the nuclear weapons against which the attack would be directed, conventional weapons seemed highly moral. This overshadowed the opposite moral considerations which might otherwise have applied to the attack of a larger country on a smaller one. About the effectiveness of available means we had very little doubt. It was clear that we could bring far more pressure to bear than the defenders of Cuba could sustain. Morale and loyalty at home were excellent. A majority of Americans probably felt that military action in the Cuban crisis did not go far enough. There was no doubt of nationwide support for the actions taken. Public support abroad, which was crucially absent

in the Bay of Pigs invasion, had been taken care of favorably by a reso-
lution of the Organization of American States approving American steps
toward the removal of nuclear weapons from Cuba. The United States was
thus acting in the name of the Western Hemisphere, not in its own narrow
national self-interest only.

The acceptability of the immediate and latent risks raises the
most interesting points. Firstly, the introduction of nuclear weapons
into Cuba pre.ented at the very least a latent risk, which was taken
very seriously by Americans, including the Administration. Compared to
this, limited military action in the Caribbean seemed a very acceptable
immediate risk, especially if the Russians could be deterred from either
widening the area of conflict (e.g., by action in Berlin or Turkey) or
from resorting to the use of nuclear weapons in the local war or in cen-
tral war. President Kennedy tried to reduce these risks by warning the
Soviet Union in the very strongest terms against resorting to any of
these means. Thus on all these counts American assurance was very high
in the initial phases of the Cuban confrontation.

Khrushchev must be given credit for perceiving and evaluating this
accurately; for he probably beat an invasion of Cuba to the punch by his
pre-emptive accommodation. This accommodation was just complete enough
to shake our assurance about the morality of an armed invasion. Public
opinion abroad was also by no means as clearly on our side as public
opinion at home. Bertrand Russell got a lot of publicity by appealing
to Khrushchev to show himself wiser and better than the U.S. by giving
in. Khrushchev answered the appeal and in effect responded to it by his
actions. While Bertrand Russell undoubtedly represented a small minority
of public opinion abroad, this and similar events were sufficient to cause
us some doubts about public opinion abroad, thus diminishing our assurance
about going through with the invasion. The immediate risk of an invasion
appeared entirely acceptable, provided that the Russians remained deterred
from widening the area of conflict or introducing nuclear weapons. But
the Kennedy Administration realized that there would also be some latent
risks involved in humiliating Russia too much. The Central War strategy
of the Soviet Union had in the past been largely defensive and not par-
ticularly menacing. If the Administration had pushed the Russians so hard
that they felt they had to procure a thousand more invulnerable intercon-
tinental missiles in order not to be pushed around like that again, then
we would have created a very considerable latent risk of doubtful accepta-
bility. This is one more reason why the U.S. Administration lacked the
assurance to go through with the invasion after the Russians had given in.

Chances of improving immediate situation: This, obviously, is one of
the most important points. The alternatives have to be grim indeed if people
are to be willing to fight with little or no chance of success. However,
such occurrences have been little known in history. The most recent examples
are the resistance of the Finns to the Russian invasion and the resistance of
the Greeks to the Italian invasion. Although the chances of improving the
immediate situation must have seemed very low, the defenders were successful
beyond expectation in each case and the final outcome may have been influ-
enced in their favor by the decision to fight, although that would be diffi-
cult to prove conclusively in either case.

Long-term trend: Even with high assurance and good chances of im-
proving the immediate situation few people will have the necessary assur-
ance to fight if they feel that the long-term trend is definitely against
them, and that the fight will only postpone ultimate failure by a few years.
(Of all the factors shaking the assurance of southern white supremacists in
their fight against Negro civil rights and integration, this is perhaps the
most serious. Even those segregationists that have no doubts about items
(a) to (g) of Table I will have doubts about time being on their side.
This effectively reduces the assurance of even the most convinced defenders
of white supremacy in the United States. In South Africa on the other
hand there seems to be a much larger percentage of those who believe that
there is a good chance of the long trend favoring apartheid.)

It is interesting to note that the belief that time is on one's side
raises the level of assurance. Theoretically, at least, the belief in cer-
tain ultimate success should undermine the willingness to work hard and en-
dure great sacrifices in order to achieve what is in any case inevitable. A
series of reverses may lead adherents of such a faith to put their trust in
time rather than in their own efforts (e.g., Soviet attempts at world revo-
lution in Alpha and Beta Worlds). But such reverses will not necessarily
shake the assurance that comes with the conviction of ultimate success, and
thus morale can remain high despite reverses that might shake the confidence
and determination of others less convinced that the future is theirs.

This accounts in part for the high assurance of Communists everywhere.
(The absolutely amazing assurance of the Chinese Communists has also been
increased by some purely Chinese traditions.) The belief in a Messianic
future may also have something to do with the resilience of Jews in thou-
sands of years of reversals and persecutions. It has already been men-
tioned that many Americans believe more or less explicitly in the idea of
a golden age at the end of history, and that may help to account for their
assurance and their forward-going optimism.

Domestic Political Acceptability

Domestic political acceptability puts severe limitations on the meas-
ures and postures that are possible in a democracy. An excellent discus-
sion of these is found in Government of Democracy in America, which was
written by Alexis de Tocqueville more than 125 years ago. We shall quote
only three sentences.

But a democracy can only with great difficulty regulate
the details of an important undertaking, persevere in a
fixed design, and work out its execution in spite of
serious obstacles. It cannot combine its measures with
secrecy or await their consequences with patience. These
are qualities which more especially belong to an indivi-
dual or an aristocracy; and they are precisely the quali-
ties by which a nation, like an individual, attains a
dominant position.

The concept can be best illustrated by making a short list of polit-
ical-military objectives and situations that would presumably not be po-
litically acceptable in the United States today.

a. Anything which makes our forces look excessively dangerous,
    immoral, or militaristic to groups with major influence.

b. Defense systems which might require the use of violence against
    innocent parties in peacetime. This would include any operation
    of strategic forces which resulted in frequent accidents. Any
    method, for instance, for preventing sneak aircraft attacks on
    the United States which would entail the occasional shooting down
    of civilian airliners is not practicable. Such operations would
    soon have to be modified as the result of public reaction.

c. The use of nuclear weapons is especially productive of problems in
    the realm of political acceptability. Any of the higher levels of
    the escalation ladder would be likely to give rise to disastrous
    problems in the aftermath. Similarly, except in extraordinary sit-
    uations, such notions as "city-trading" probably would run into in-
    superable political opposition. This is a tactic more acceptable
    to the Chinese than to us.

d. The repercussions of fallout problems caused by weapons testing
    have their counterpart in the very dramatic reactions to civil
    defense programs. Many of the civil defense controversies re-
    volve around problems of political acceptability. Explicit agree-
    ments to ban civil defense have been discussed as a form of arms
    control but might also prove politically unacceptable.

e. Similarly, some inspection procedures under future arms control
    agreements might clash with American laws or mores.

In the future, political-military objectives such as Assurance,
Stability, Arms-Race Deceleration and Political Acceptability are likely
to become more important. For example, concern about the possibility of
accidental war and world annihilation seems to be increasing. Both possi-
bilities are now popular themes of literature. During the Decade there
may be a barrage of such warnings. And technology will have reached a
point where it really does look dramatically dangerous. We are going to
need both the appearance and the reality of safety, the appearance and
reality of morality, and in general, of compatibility with many democratic
values and goals. Assurance, Stability, Arms Race Deceleration and Polit-
ical Acceptability are therefore going to be more important, and unless
our posture supports these objectives (both in appearance and reality),
there is a great likelihood that compromises will be made in the other
objectives until the posture does meet acceptable standards in these
respects.

Foreign Political Acceptability

As mentioned before, this is closely linked with the national inter-
est and beyond. It is also closely linked with alliance cohesion. Lastly,
owing to the respect of the American people for the opinions of mankind,

foreign political acceptability interacts directly with domestic political
acceptability. This is a two-way process. It is alleged, for instance,
that the Japanese did not find the atom bombs dropped on Hiroshima and
Nagasaki an outrage until they learned that they were so considered by
some sections of the American public. On the other hand, it has been
pointed out above that approval by the Organization of American States
made all the difference between the abortive Cuban invasion of 1961 and
the effective action by the United States in the Cuban crisis of 1962.

Strategies which make excessive demands on our alliance partners are
presumably unacceptable politically. This might include things like con-
scription for allied conventional forces or excessive central control over
these forces or stringent requirements for coordination of the forces that
would entail discussion of so many contingencies that the resulting contro-
versies and strains might finally disrupt the alliance.

Finally, we have to take into account, as part of foreign political
acceptability, the domestic political acceptability of central war poli-
cies inside the countries of our alliance partners. It is becoming in-
creasingly obvious that U.S. interests are not completely identical with
those of the alliance partners, and that the alliance partners require a
greater capability of independent decision in the strategic area than has
been granted to them hitherto. In addition to the possible diversity of
interest in tense situations, there is also the national pride in pursuing
an independent nuclear policy and having independent nuclear capabilities.
This has already led to some differences with France, and may one day modify
our relationship with presently "docile" allies as Japan and West Germany.

Wide Range of Political and Military Options

The escalation ladder presented in Chapter II is a collection of a
wide range of political and military options. The classical notion was
that one took military action if political methods did not yield satis-
factory results. The high cost and risk of thermonuclear war has made
such action self-defeating and absurd for any but the greatest issues.
Nevertheless, a side that was obviously completely unwilling or unprepared
for military action would have a grave disadvantage in confrontations and
in bargaining with a side that did not limit its course of action so ex-
plicitly. This dilemma led to the notion of escalation and of the escala-
tion ladder: a large series of political and military steps which could
be tried out to test the resolve and degree of commitment of the enemy in
order to bring about a favorable resolution of the conflict. As has been
discussed elsewhere, this is a dangerous game, bearing some resemblance to
the game of "chicken" played by juvenile delinquents.

The point to be made here is that the possession of a wide range of
options gives one the means of intensifying the escalation process if it
is important to do so without approaching too closely the upper levels,
coupled with a capability of de-escalating or moderating the level of
violence in an appropriate way, either because some results have been

achieved or because the situation is becoming too tense. It is clearly
important not to become committed to a level of conflict which may turn
out to be inappropriate to both sides' intentions or objectives.

It should never be forgotten that such factors as assurance, resolve
and commitment interact strongly with the range of political and military
actions available. Absence of capability at the lower rungs of the ladder
may make any military threats incredible to the enemy and may moreover
undermine assurance at home.

Ceiling on Possible Harm

This, of course, is closely connected with the acceptability of risks
discussed above. In all operations in which war looms in the background
as a threat, consideration of its outcome if it should happen may become
crucial to assurance. Some of the Central War strategies discussed in
Chapter II and Chapter XII have deliberately chosen to put no ceiling on
possible harm to discourage destabilization by escalation maneuvers. In
the long run, however, such strategies may be too stark to be politically
acceptable.

It works the other way also. A highly vocal segment of American pub-
lic opinion is opposed to civil defense because it makes nuclear war more
thinkable by limiting the harm it can do. Opposed to that, such strate-
gies as DI and EI as well as ACD put large emphasis on civil defense,
partly because of the realization that war may occur and that if it does
it is better to survive it than not. The knowledge that annihilation is
not a necessary result of a conflict goes a long way, of course, towards
increasing assurance.

A further example of putting a ceiling on possible harm are the so-
called "war-fighting rules" which can be unilateral, bilateral by tacit
consent, or solemnized by formal agreement. Such agreements are not as
sensitive to cheating as arms control agreements limiting the kinds and
numbers of weapons. The capability exists on both sides, and if the enemy
does not reciprocate in restraint it is possible to abrogate such an agree-
ment at the shortest notice. This fact has made it possible for the United
States to declare a "no first strike at cities"[14] doctrine unilaterally,

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[14]"...principal military objectives, in the event of a nuclear war
stemming from a major attack on the alliance should be the destruction of
the enemy's military forces, not of his civilian population." (Secretary
of Defense Robert McNamara at Ann Arbor, Michigan, on June 16, 1962.)

"In talking about global nuclear war, the Soviet leaders always say
that they would strike at the entire complex of our military power includ-
ing government and production centers, meaning our cities. If they were to
do so, we would, of course, have no alternative but to retaliate in kind.
But we have no way of knowing whether they would actually do so. It would
certainly be in their interest as well as ours to try to limit the terrible
consequences of a nuclear exchange. By building into our forces a flexible

expressly reserving the right to abrogate adherence to this doctrine if
the Soviet Union does not reciprocate.

Khrushchev has repeatedly made it clear that he does not understand
this fine distinction and does not believe that it is possible to avoid
the destruction of cities in a war. It has been pointed out before that
this attitude may be genuine, but is in any case partial defense against
a NCF or Credible First Strike policy.

Effectiveness and Controllability

Some points closely connected with effectiveness and controllability
have already been made--even about their interaction with assurance. What
was said before about individual weapons should be repeated here about
the whole system. It is difficult to achieve assurance unless one has
faith in the functioning of all parts of the system and in being able to
control its functioning. An air defense system, however elaborate, that
is ineffective over a wide range of possible attacks is as bad for assur-
ance as a superb automatic retaliation system that might occasionally be
triggered by an unusual combination of false signals, short circuits and
unauthorized behavior. Neither, of course, is politically acceptable,
but heavy reliance on classified information has a delaying influence on
the political process. It is the people operating the system who must at
least have some dim awareness of its shortcomings which will adversely af-
fect their assurance. Hardened Minuteman missiles are better for assur-
ance than manned bombers, not only because they are more likely to remain
effective for a second strike, but also because their greater survival
potential allows them to be used in a far more controlled fashion and with
less haste. From an assurance point of view, Polaris submarines may be
better than either, because they do not give rise to fear of a disarming
attack by the enemy.

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capability, we at least eliminate the prospect that we could strike back
in only one way, namely, against the entire Soviet target system includ-
ing their cities. Such a prospect would give the Soviet no incentive to
withhold attack against our cities in a first strike. We want to give
them a better alternative. Whether they would accept it in the crisis
of a global nuclear war, no one can say. Considering what is at stake,
we believe it is worth the additional effort on our part to have this
option.

In planning our second strike force, we have provided...a capability
to destroy virtually all of the "soft" and "semi-hard" military targets
in the Soviet Union and a large number of their fully hardened missile
sites, with an additional capability in the form of a protected force to
be employed or held in reserve for use against urban and industrial areas."
(Statement of Secretary of Defense McNamara before the Senate Armed Serv-
ices Committee. Fiscal Year 1964-1968 Defense Program and 1964 Defense
Budget.)

Such central war strategies as NCF depend in some measure on the
availability of a weapons system that is effective enough to disarm the
enemy and controllable enough to hold collateral damage to countervalue
targets to a minimum. And this minimum is determined by political accept-
ability at home and abroad and also by the effect on the enemy whom we do
not want to salvo with his remaining force.

Effect on Principal Enemies

The classical object of weapons procurement was the effect such wea-
pons had on the enemy. They could be used to wound and even to kill
enemy soldiers, but even if they were not so used, their very possession
could be exploited in dealings with the enemy. When Clausewitz described
war as the continuation of politics by other means, he did not do justice
to the effect that the possession of weapons had on the enemy even in
peacetime. The cannons of the kingdom of Prussia bore the engraved in-
scription "Ultima Ratio Regum," the last resort of Kings. In all confron-
tations, both sides had to take into account that as a last resort vio-
lence was available to settle the conflict. This naturally affected their
positions in the confrontation. This situation is closely related to the
concept of escalation explained by means of the escalation ladder in Chap-
ter II. The point that should be made here is that to have an advantage
in bargaining situations, weapons superiority, counted in numbers or in
megatons, is not enough. For one thing, the use of nuclear weapons in a
tight confrontation over relatively unimportant issues may simply not be
credible enough in use for bargaining--even if it were desirable. It is
hard to imagine that a country would court annihilation over issues that
were only peripherally in the national interest. Smaller threats may be
more effective than large ones through being far more credible. Thus es-
calation capability is enhanced by having access to rungs of the escala-
tion ladder that are not available to the opponent.

Central war strategies should always bear in mind the effect of the
strategy on the bargaining postures. In some of the central war strate-
gies (e.g., EI or NCF) the main objective is to prevent a disastrous in-
feriority in bargaining posture. As we have discussed, this is by no
means only a question of weapons or weapons systems. The escalation dom-
inance in terms of equipment may sometimes be nullified or offset by su-
perior resolve or commitment on the part of the opponent.

Escalation adequacy may or may not become important in the Decade,
very much depending on the kind of world we shall find ourselves in. So
far as U.S.-S.U. confrontations are concerned, the central war forces are
likely to play a smaller role in escalation than they do today because
the strategic balance between the two superpowers seems to be tending to-
wards greater effective stability, though it may turn out to be multistable.
Or it is, of course, possible that the U.S. will retain a significant de-
gree of superiority. This may occur because the S.U. is discouraged from
trying to catch up with us, or it may occur because the Soviet leaders are
not very interested in having large and efficient central war capabilities.

They have, in fact, in the past tended to buy facades or forces which would
be as valuable for diplomatic display as for fighting a central war. Whether
this was because of strategic naivete or political sophistication or a mix-
ture of the two, or for some other reason, is an open question. However,
it may be of extreme importance to have escalation dominance over China,
particularly if she has enough nuclear weapons to try to make deterrence
a two-way street between her and the United States. This requirement may
rule out some forms of MFD and NMR strategies as inadequate and unacceptable.

In any case the effect on the principal enemy is the paramount issue
in the choice of an ACWS. We neither want to look so dangerous that the
enemy feels he has to build up his forces to increase his security, nor do
we want to seem so harmless that he is not deterred from provocation, or
is tempted to gain superiority over us, or underestimates our will or
capability.

Effect on Others

Our strategies and our weapons should not only be concerned with the
enemy's reactions. The whole world we live in will gradually change in
stability, and we should rather have it become more stable than less. One
aspect of this is the Nth country problem. We have the feeling that the
Soviet Union and the United Kingdom are responsible in their use and non-
use of nuclear weapons, and we hope that France will be equally so. Of
other countries we are by no means sure. In the case of a few leaders,
such as Castro or Nkrumah, we should consider world stability considerably
lessened if they obtained nuclear weapons. Our own use of nuclear weapons
(means not only their employment but also their use to obtain foreign policy
advantages) will have an influence on the attitudes of other nations about
procuring nuclear capabilities.

Our interest in alliance cohesion goes far beyond the ordinary one of
trying to have as many allies as possible. France, for instance, is not
so strong that we should have to fear her as an enemy. What we are fearing
at the moment is that she may lessen the present stability precisely by be-
coming an ally which also pursues an independent policy inside a less co-
hesive alliance, thus possibly destabilizing our present relationship to
the Soviet Union.

Similarly, the Soviet Union does not fear China's nuclear war poten-
tial, but is concerned about the destabilization of world Communism. There
is now a competition for allegiance inside Communist parties all over the
world and the revolution of the proletariat can no longer maintain the
facade of unity. The lessened cohesion inside the Iron Curtain alliance
will presumably allow the East European satellites and others to pursue
policies more independent of the Kremlin.

Occupation with the probable should never blind us to the existence
of dangers that might face us from unorthodox opponents. The kind of oppo-
nent we have in mind is one that upsets the applecart by breaking established
rules of conduct, whatever they are. He may be the kind of opponent against

whom our armaments are ineffective, however excellent they may be against
a more powerful enemy. We may be more vulnerable at this very moment to
unorthodox attempts to coerce us than we are to any number of orthodox
military threats. Unless some serious planning, and possibly procuring,
is done in this field, we may find our political-military objectives
thwarted from unexpected directions.

Enough examples exist in history of unorthodox attacks that were
startlingly successful because they were entirely unexpected. The last
25 years are full of examples, partly because Hitler was past master in
the art of doing the unorthodox:

> Hitler's rape of Czechoslovakia by blackmailing Hacha, 1939
> Hitler's pact with Stalin, 1939
> Hitler's seizure of Denmark and Norway, 1940
> Hitler's circumvention of the Maginot line, 1940
> Hitler's frontal break through the Maginot line, 1940
> Hitler's seizure of Crete by parachute troops, 1941
> Hitler's invasion of the Soviet Union, 1941
> U.S. Pacific Fleet bombed by Japan, 1941
> Singapore taken by Japan, 1942

All these political-military actions were completely unexpected at
the time and were thus vastly more effective than they should have been.
More recent examples are the Chinese invasion of Korea which took our
military leaders more or less by surprise and which was vastly more ef-
fective than it should have been, as well as the Chinese invasion of
India which took India by surprise and was probably more effective than
it need have been.

There is a large field here in which ingenuity may be exercised in
the future, and there is a great danger that it may be done with thermo-
nuclear weapons or thermonuclear threats. To the extent possible, we
should be prepared for a range of such unorthodox threats.

It is obviously impossible to buy equipment designed to counter all
conceivable actions of really bizarre opponents. What is needed is an
awareness that tactics of excessive commitment or simulated irrationality
or true insanity may be used against us, and that, under many conditions,
there may be better alternatives than giving in to such unorthodox threats.
(LSR, EI, and NCF are designed around the need for such alternatives.)
One measure which might mitigate such threats would be a capability for
putting our people in places of relative safety after we have been threat-
ened. Such an action would permit us to temporize or call the bluff by
indicating that we are willing to go to war if necessary.

Another capability that may become necessary is the detection of mis-
sile launchings in any part of the world and the subsequent identification
of the launching agency (e.g., a submarine). If such a capability could
be developed effectively, this would go a long way towards discouraging
ahonymous attacks or attacks designed to catalyze a war between the major

powers. Since by the end of the decade some powers less responsible than
the present nuclear powers may have acquired nuclear capabilities, this
may soon become a research subject of some importance.

Responsiveness

Responsiveness may be compared to a melodic theme which recurs in a
lower key in each of the subsequent levels of analysis, these being called
adaptability or flexibility. The word responsiveness, however, has the
distinct meaning that the commander-in-chief should be in quick and easy
control of the political as well as the military situation--all things be-
ing responsive to his will. The chief components of responsiveness are
these:

          a.   short reaction time
          b.   long holding time
          c.   controllability from above
          d.   gradability of response
          e.   specificity of response
          f.   usability by responsible authorities

In other words, it is important to be able to react quickly, but not
to be compelled to do so. Politically it is important that the response
is controllable at top level, even though for some military uses it might
be preferable to leave a large measure of control to the personnel in the
field. The response has to be capable of gradation from very small to very
large and it has to be specific, accomplishing its exact purpose without
unwanted side effects.

These components of responsiveness interact at various levels, as is
illustrated in Table III, which deals with the components of responsive-
ness and their significance at the political-military level and the level
of central war capabilities.

TABLE III

Responsiveness at Two Levels

	IV. Political-Military	VI. C.W. Capability
Short reaction time	Speedy decisions	Short countdown
Long holding time	Maintaining morale	Invulnerability
Controllability from above	Public opinion	Central command and control
Gradability of Response	Diplomatic context	Range of weapons
Specificity of Response	Communication value	Low CEP; low yield

<u>A PARADIGM FOR THE</u>
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PART III: "Recapitulation and Synthesis"

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CHAPTER XII

SECOND DISCUSSION (FIRST ITERATION) OF
ALTERNATIVE CENTRAL WAR STRATEGIES

In this chapter we will still discuss ACWS's in a relatively timeless and simplistic fashion; that is, we will not take account of phasing problems, hedging against uncertainties or changing one's mind, the developing power of Nth countries and the complexities this involves in contrast to the simplicity of evaluating one's posture only vis-a-vis the Soviet Union, etc. Furthermore we will still concentrate on the Central War area and not try to place these considerations into the context of total basic national security policies (as on pages 44-47).

Some of the accompanying classified reports will make up for some of the omitted discussion of phasing, hedging, context, and contingency analysis. It should also be clear, though, that many issues which were very relevant in the fifties, less so in the early sixties, and which appear to be tending towards irrelevancy in the late sixties and the early seventies, may become important again in the mid or late seventies as Nth countries enter the calculation. It thus is worthwhile to discuss these issues here--not because we are looking backwards, but because we are looking forward.

Subject to the above, we would like, in some sense, to cover all the major points in the report a second time. That is, we have built up a considerable amount of methodological machinery, have explained a number of concepts, and have defined or illustrated a number of terms. We would now like to use this apparatus in discussing the problem of choosing an ACWS (Alternative Central War Strategy). We start by reproducing a list (from Chapter 2) in which 15 Central War Strategies were ordered roughly in terms of increasing use of the ACWS for foreign policy advantage--starting from a position which emphasized pacifistic deterrence (the notion that the only purpose of strategic military forces should be psychological--they are never actually to be used, and almost no attention should be paid to the possibility of deterrence failing) through an increasing emphasis on the possibility of war actually occurring, ending with strategies which emphasize the use of central war threats and capabilities as a "continuation of politics by other means":

1. Minimum Deterrence (MD)
2. Finite Deterrence (FD)
3. Strategy as Currency (SC)
4. <u>Mostly Finite Deterrence (MFD)</u>
5. War Stopping (WS)
6. <u>Arms Control Through Defense (ACD)</u>
7. <u>Deterrence Plus Insurance (DI)</u>
8. <u>Expanded Insurance (EI)</u>
9. Contingent Homicide (CH)
10. Limited Strategic Retaliation (LSR)
11. <u>Not Incredible Counterforce First Strike (NCF)</u>
12. Contingent Preventive War (CPW)
13. Credible First Strike (CFS)
14. Pure Massive Retaliation (PMR)
15. Not Incredible Massive Retaliation (NMR)

It should be clear that the above ordering is to some degree arbitrary; different individuals would change some of the places; for example, either of the Massive Retaliation strategies (PMR or NMR) might be moved down the list by some of their adherents, and Limited Strategic Retaliation (LSR) could easily be put much lower or much higher on the list. The names designate basic themes for use in designing packages. In all cases many different detailed strategies could be designed which would be examples of the basic theme. (In the case of Minimum Deterrence, for example, the specific strategies might be labeled MD-1, MD-2, etc.). In addition, it is sometimes desirable to give almost equal emphasis to several themes, thus creating additional packages. In particular, the themes SC, LSR, and NMR (Strategy as Currency, Limited Strategic Retaliation, and Not Incredible Massive Retaliation) may combine with other strategies as major co-equal themes. (They figure as minor themes in almost all of the strategies and only get the labels SC, LSR, and NMR when the named theme dominates other considerations.)

The reader may be appalled at the length of the list. We would argue that it is necessary to have such a lengthy list if we are to do an adequate job for the whole of the Decade on the objectives of Chapter IV. Of course many themes are included for purely methodological or didactic reasons and we judge that only themes MFD, ACD, DI, EI, and NCF are to be taken seriously as possibilities for the United States today, though many of the other themes may apply to Soviet or Nth country strategies.

1. Minimum Deterrence (MD)

One reason for including this strategy on the list is to have an end point against which we can make comparisons. Another reason is that many people actually hold this position. Minimum Deterrence exploits the awesomeness of modern weapons technology by means of such things as deterrence by uncertainty and deterrence by threshold; or it can be a strategy which relies mostly on sheer lack of real aggressiveness on the part of potential attackers.

To some degree, the basic MD position--that a very small number of reasonably well-protected missiles (possibly only 5 or 10 or a somewhat larger number with poorer protection), with some kind of rudimentary command and control system, is an adequate deterrent to a direct attack--must be respected, at least, by some nations and in some circumstances. Even if the potential attacker believes he has "adequate" active and passive defense to protect himself if his attack goes awry, and even if he believes he will not touch off a catalytic war with a larger power or cause some other undesirable consequence by his attack, "He cannot really be sure!"

In terms of the simple P-Q model illustrating levels of deterrence (as explicated on page 129), we can state that a minimum deterrent force, and sometimes one which is almost completely a facade, may still provide specific nations with a "workable" or "adequate" deterrent in practice. For example, in some version of the Omicron Worlds (Gallois-Khrushchev-Millis-Other Non War) we may have a situation in which every country has its own minimum of finite deterrent force. While most of these forces

may be so vulnerable that, on paper, country A could well attack and de-
stroy country B's forces, we still would hardly be surprised if the mini-
mum deterrent did in fact work in practice. In other words, we need the
minimum deterrence concept simply because it describes a very important
range of potentialities relevant principally to the possibilities of very
substantial disarmament (and perhaps extremely effective active and passive
defense systems--see ACD strategy below), or the diffusion of nuclear
weapons, as well as because it has a certain historical and theoretical
interest. One might even wish to go further and define a special extreme
form of MD--Deterrence by Facade, or Deterrence by Taboo: Deterrence that
functions because of a widespread and almost superstitious belief that,
whatever the calculations, one does not attack (or perhaps even excessively
provoke) the owner of nuclear weapons.

Thus by having a package called Minimum Deterrence, without putting a
specific floor on the necessary capabilities for this package, we specifically
recognize that, "nuclear weapons are different" and that it is not likely
that two nuclear powers will approach the possibility of war between them
in the same spirit as two powers without nuclear weapons--almost independ-
ently of the objective capabilities of the two powers. Having fully recog-
nized, or perhaps over-recognized this principle, we have also attempted to
emphasize, the many real differences that objective calculations or asymme-
tries can make at the various levels of analysis and in various circumstances.

2. Finite Deterrence (FD)

This is today a relatively old-fashioned position, but it was a very
popular position among many intellectuals and arms controllers in the late
'50's. There were many who conceded that we had to have some sort of
assured and adequate capability to retaliate countervalue if we were at-
tacked but assumed that this was all that was necessary; these individuals
were willing to spend money and effort to have the physical capability for
a reliable second-strike spasm threat but did not believe that there were
any other strategic problems that required attention. This position might
be thought of as a responsible pacifistic deterrent. For our purposes we
will replace this position with some form of the MFD position, at least so
far as this general viewpoint may provide a possible ACWS for the U.S.
Some forms of MFD have almost all the advantages of FD and yet are not so
starkly disastrous if deterrence fails; thus they are potentially accept-
able policies. There are, it is true, some adherents of FD who would not
accept any compromise or concession to a "war-fighting" capability--some
even being unwilling to include an option for other than spasm response.
There are a number of reasons why adherents of FD (and other Deterrence
Only strategies such as MD, PMR, and CH) might take such extreme point
of view:

1. to save money

2. to make threats more credible by showing that we don't
    calculate

3. a firm belief that deterrence will work (therefore steps
    toward improved war outcome are a concession to other
    viewpoints--i.e. an SC approach)

4. belief that the outcome of a TN war cannot be improved;
    it is simply infeasible to work for more than deterrence

5. belief that one's will is eroded or one's credibility is
    diminished by worry about the possibility of deterrence
    failing; by showing perfect faith in the "bluff" one in-
    increases greatly the chance that the "bluff" will work

6. because of other disutilities to thinking about the details
    of war--these disutilities can show up in terms of decision-
    makers' time, self-fulfilling prophesies, too great a pre-
    occupation with military matters, creation of an aggressive
    image, enhancement of arms races, creation of special
    interest or pressure groups that will work to increase pro-
    grams, etc.

7. because it seems cowardly (or Maginot minded) to concentrate
    on defense--i . an extreme belief in the sloga. . "offense
    is the best defense."

Most adherents of a Deterrence Only strategy have some mixture of
these motives, some of them held consciously and rationally and some held
very emotionally. The disadvantages of the Deterrence Only strategies
can be listed in much the same way, the arguments merely reversed. Thus
the negatives of 2, 3, 4, 5, 6 and 7 can all be asserted just as plausibly
(or more so) and all are reasons for not having a Deterrence Only Strategy.
In particular, the discussion of credibility on pages 284-285, whether
right or wrong, is more typical of current analytical thinking and prac-
tical policy making.

The argument for a Deterrence Only strategy can be greatly strength-
ened if one has, either explicitly or implicitly, an LSR capability. Of
course, in the viewpoint of a knowledgeable opponent, such a possibility
is always at least implicitly present. Some of the analysts who support
Deterrence Only strategies do explicitly add an LSR component or capa-
bility. Normally, however, those who argue Deterrence Only strategies
really do seem to believe either that bluff will work or that it's not
really a bluff--one simply does press the button, usually with a spasm
option, if deterrence fails.

One of the great advantages of such Deterrence Only strategies is
the seeming simplicity of both the concept and the hardware and the gen-
eral acceptability of its obviously nonaggressive character (except pos-
sibly for Massive Retaliation). Its extreme dependence on the use of
terror and irrationality if it fails is either accepted as an inevitable
cost or ignored as nonexistent, because the occasion for terror and irra-
tionality is not supposed to occur.

The simplicity of the Deterrence Only position is reflected in the war plans (a simple spasm of countervalue destruction), command and control (a "go ahead" order plus some ability for retargeting to take account of last-minute destruction or other changes), weapon systems (only city-busting or people-destroying forces need be considered), targets (known cities), etc. All of the other positions will be more complicated to design, maintain and understand conceptually. The complexity automatically decreases the feasibility and ease of justification for the alternatives to the Deterrence Only strategies. (This ease of justification is a real consideration, since it may be possible to get a complete Deterrence Only posture but only a faulty Counterforce or "calculated" Type II Deterrent.)

3. Strategy as Currency (SC)

Here again it was necessary to invent a slightly artificial category in order to be able to make simple references to an important class of people: those individuals who, like the Minimum Deterrent (and some of the Finite Deterrent) advocates, do not take seriously the possibility of a nuclear war, or even the need for reliable deterrence, and therefore have no real interest in war-fighting capabilities, or objective capabilities in general, but do find that other people take these things seriously. Therefore they find it necessary to get into the strategic business for political or other reasons that have little to do with the objective possibility of fighting a thermonuclear war; they are concerned only with satisfying internal domestic or external alliance needs.

Thus, Strategy as Currency applies when there is not much interest in the national government in Central War capabilities and the chief interest is in their effect in other fields, not in the Central War area itself. Therefore, the objective would be to exploit the ACWS for benefits elsewhere. This does not necessarily mean that the Central War capabilities are only facades, however, because it may turn out that in order to get benefits elsewhere there is a requirement for a significant objective capability. But the emphasis is on political benefits, not on the war-fighting characteristics or the deterrent character of the capability.

One possibility would occur when one feels quite confident the other side is deterred even by a facade, but the other side does not feel confident that you feel confident; this could give the other side a great escalation advantage. In order to persuade the other side that one feels confident, it may be necessary to change from a facade to objective capability--not because you think you need it for deterrence purposes, but you think you need it for escalation purposes in the psychological bargaining; or the objective capability may be needed to persuade one's own citizens to feel safe. There may also be a requirement to have a system that can withstand parliamentary criticism or criticism by skilled experts. However, by and large, one thinks of Strategy as Currency as being mainly concerned with facade rather than objective capabilities, though in principle this is not necessarily so.

We indicated that SC was a very likely position for an Nth country when we gave 13 objectives (see page 109) that such a country might have in procuring central war forces. More than half of the objectives include some form of SC considerations. There are many people in the United States, and we presume in the Soviet Union as well, who have this point of view. Some are SC because they do not feel one can alleviate a central war; therefore it does not make any difference what the nation tries to do, the result will be the same if deterrence fails. Others feel that deterrence is so easy that war simply cannot happen. Both of these groups are still willing to buy very elaborate capabilities for reasons other than those which would be suggested by a narrow cost-effectiveness analysis.

4. Mostly Finite Deterrence (MFD)

MFD is the first of the realistic and complex postures. Thus there is often some difficulty in applying the concept in practice. Let us consider, for example, U.S.-1 versus S.U.-1 (see page 27). If we ignore for the moment the possibility of movement, and if we assume that the Soviets have been reasonably competent about protecting their strategic forces, it is fair to say that as far as the most vulnerable 50-100 million Americans are concerned, S.U.-1 is an MFD policy. That is, there is no way that the U.S. could prevent the Soviets from killing these people even after the first two or three waves of missiles and bombers had been launched on each side. One would imagine a relatively constrained slow-motion counterforce war in which the Soviet forces were eventually so degraded that even these vulnerable Americans were, in fact, safe from Soviet attack. But at least for the first few waves of the war this would not be likely. However, as far as the less vulnerable 125-175 million Americans are concerned, there are many circumstances in which we would expect U.S.-1 to provide them with a reliable protection from the Soviets-- in particular, wars in which the Soviets launched their first attack, mostly counterforce, or wars in which the U.S. struck first. Because 50-100 million Americans is a large number, however, we would still say that U.S.-1 could only support an MFD policy. If this number were reduced to something between 10 and 20 million, say, by use of evacuation or improvised protection procedures, we would then characterize it as being one of the policies further down the list, exactly which one depending upon other elements of the strategy. If, for example, there had been no attempt to get extended deterrence out of this extra capability, we would call it a DI policy. (We would not, however, call it an EI policy because only the minimum has been spent specifically for insurance and other EI capabilities.) However we could have S.U.-1 support an NCF policy if it was reasonably clearly understood by many people that a U.S. evacuation might well be used in a crisis in order to extend the U.S. strategic deterrent to Europe. So whether or not one scores S.U.-1 as being able to support MFD, DI, or NCF would depend heavily upon how one viewed the improvised protection capabilities and how the government attempted to use the possibility of such improvised protection. We would rather guess that MFD would likely be the correct characterization of the government's policy in the early '70's with this particular posture.

It should be clear that an MFD policy could thus have quite large strategic forces with very elaborate command and control (so that these strategic forces would at all times be under civilian or other high-level direction), and could even have a good deal of active and passive defense of civilians and property, yet still it would be MFD--so long as this active and passive defense was not adequate enough to provide a high probability that civilians would be protected from an enemy who tried to destroy them at some point during the early stages of a war.

It should also be clear that the "scoring" scenario is important in judging whether ACWS is MFD (see Table I on page 18). For example, U.S.-A (see page 27) might well be judged sufficiently capable to support NCF against a Soviet Union which, for purely blackmail reasons, suddenly blew up the ten largest cities in ten large nations. Such a U.S. might be so outraged and fearful that it would attack--and accept the loss of approximately 50-100 million Americans. The point we are making is that against S.U.-A and "reasonable" provocations--including such things as ground invasions of Europe--we would tend to say that U.S.-A could not support more than an MFD policy (with the exception based on a capability for evacuation previously noted). On the other hand, if it had the right kind of equipment, it could clearly be NCF or even CPW or CFS against China for a very large range of provocations.

There are many possible Level Four and Level Five doctrines for the operation of an MFD force. The most likely one is some kind of deterrence by reprisal. That is, whatever the opponent does is done back to him in approximately tit-for-tat fashion. The only purpose of the strategic forces is to "neutralize" the other side's forces. While all are agreed that the threat of a spasm response would be more deterring, it is generally felt that this threat is relatively incredible and also dangerous because a war could still arise, if only as a result of accident or miscalculation. One can, of course, keep the threat more or less ambiguous, or one can go to a great deal of trouble to assure the other side that one will never carry out a spasm attack except in response to something that is interpreted as a spasm attack.

5. War Stopping (WS)

This is a conceptually important strategy because it emphasizes, or at least raises the possibility, that very large forces might be more desirable--in the arms control sense--than small or moderate forces. It is, of course, similar in spirit to MFD, but without including that tendency towards restraint in procurement of strategic forces which most supporters of MFD strategies possess; that is, adherents of WS might buy tens of thousands of missiles and other weapons systems, but they buy these weapons not because they are oblivious to the possibility that they might be used but, rather, to make it even more inconceivable that even a medium large war or a serious arms race might occur. The WS adherents, as with MFD, do not, however, buy much active and passive defense for civilians, and they are likely to follow a deterrence-by-reprisal operating doctrine. They do not wish to be, or to appear, aggressive.

The major difference between MFD and WS, then, is simply that the WS people believe it is safer to use our large material resources to put the most optimistic, ingenious, and reckless potential attacker or arms racer clearly out of business (both from the viewpoint of peacetime operation of the forces and if deterrence fails) by having a large excess retaliatory force with which it is senseless to compete. There is no intention to use the excess force, and every attempt is made to reassure the major opponent of this fact.

The strategy gets its name from one of its objectives--to procure so large and invulnerable a force that, if deterrence fails, and whatever the sequence of events (in particular, no matter how lucky or clever the opponent is), it invariably will profit the opponent to stop the war; he cannot disarm the WS posture. The great redundancy of forces procured by this strategy is also designed to remove any need for urgency of retaliation (and thus reduce possibilities for accident or miscalculation), reduce concern about technological advances or mistakes in design, and discourage attempts by others at arms racing or even competition by making the attainment of a usable level of arms, much less a significant or usable superiority, by others clearly impossible.

In fact WS may be more practical than is generally supposed. The United States clearly has the resources to build such a large force that any other country would be discouraged from competing by the hopelessness of the attempt. It is hard to imagine even sophisticated technological developments nullifying the "brute force" approach of having thousands and thousands of protected missiles to assure the penetration of perhaps a few hundred.

An obvious argument against WS strategies that may well be wrong is the objection of high cost. There is reason to believe that the number of offensive weapons can be multiplied at decreasing costs per weapon. As compared with big Deterrence-plus-Insurance postures, the WS involve important savings in the areas of command and control, counterforce capabilities, quick reaction, and active and passive defense. These postures thus may be less expensive than some DI strategies and achieve much the same objectives.

Another objection is based on the straightforward idea that very large numbers of nuclear weapons of high yield are bad per se. Clearly, when there are very large numbers of nuclear weapons around, the worst possible outcome is worse than the worst possible outcome in a situation where there are many fewer nuclear weapons. On the other hand, the test of "worst possible outcome" is in many ways a peculiar and not very appropriate test. But the last objection to WS, perhaps the basic one, is simply that it seems "crackpot."

It is useful to have this category in part because it is important to make it conceptually clear that one can want very large strategic forces and still have a prudential and even defensive attitude, and in part because some of the more "prudential" MFD supporters end here.

6. Arms Control Through Defense (ACD)

This posture could just as easily be called Defense Through Arms Control. That is to say, one can emphasize that arms control can be made to work because each side procures very adequate active and passive defenses and therefore is willing to trust control measures on strategic offense forces, or one can emphasize that defense can be made to work because of the limitation on the strategic offensive forces (i.e., defense through arms control). While ACD is a relatively new and undiscussed idea, it seems to the editor of this report that it might easily be the most feasible and perhaps the most desirable form of serious arms limitation. As far as the U.S. and S.U. are concerned, if the other side has not cheated in offensive forces one does not really care about its capabilities in the civil defense and active defense fields. Neither nation can hurt the other with shelters or even anti-ballistic missiles or fighter aircraft. If, however, one side or the other cheats, then it is exactly at this point that these active and passive defense programs become essential; because they make the cheating less consequential.

Thus Arms Control Through Defense tries to make arms control more palatable by limiting the risks, and this is accomplished by increasing the defense capability, presumably on both sides. To give an example, one could imagine 100 missiles on a side and very elaborate active and passive defenses. Under this situation, the two countries would not worry much if one side or the other cheated because the threat from 200 missiles is not much greater than from 100 missiles, and, in fact, on paper the active and passive defenses might be able to degrade both attacks to "acceptable" limits. However, neither side can be so certain of its defenses that it is likely to risk provoking the other side. The Arms Control Through Defense has another great advantage in that it is not naked to third, fourth, and fifth powers. It could also have a capability to significantly increase its offensive forces if this becomes necessary.

Furthermore, ACD does not encourage any of the Nth powers to "cheat," or even compete, because even if these Nth powers get quite large offensive capabilities they cannot really challenge super-nations which possess elaborate active and passive defense systems. ACD acts, in other words, as a damper on the arms race generally, and does so specifically because it emphasizes that the big and small powers are not equal. A nuclear world is not like the Wild West and it takes more than just a six-gun to be able to play the game. Their defensive capability in turn further reassures the great powers as to the safety and desirability of accepting limitations on their offensive forces.

So far as Type I Deterrence is concerned, the strategy is probably at least "workable" if not "adequate." If there is a countervalue retaliatory attack the active and passive defense systems, even if they work quite well, will not prevent a great deal of property from being

destroyed.[1] Many lives will also be lost and there will always be the
possibility that the defenses will work badly: i.e., ACD has many of the
advantages of Minimum Deterrence and Finite Deterrence without the dis-
advantages of forcing one's people to be stark hostages.

There is also some possibility that each side will have a fair
amount of Type II Deterrence, just because thermonuclear war is indeed
more feasible. In other words, some ACD postures are more like the
multistable situation described in the first P-Q models--a situation, by
and large, which many analysts, including the editor, find preferable to
the ordinary stable deterrent position.

An ACD policy can be a parity policy or not, depending upon the de-
tails. There may be lack of parity either by agreement, because one side
is simply much more competent than the other side technically, operation-
ally, or strategically, or because one side or the other puts more effort
into uncontrolled parts of the posture. (There may only be limits on
offensive forces, and each side may be encouraged to do what it wants to
and can in the active and passive defense fields.) ACD may not only be
feasible and desirable, it is also conceptually important because it
indicates that the usual notions that active and passive defenses are
always destabilizing and somehow bad from the arms control point of view
are not necessarily correct--it would be rather strange if they were.
Somehow the emphasizing of the use of one's own civilians as hostages
(as is true in all of the five previous strategies) does not really seem
to be so obviously moral, prudential, and in the national interest as so
many seem to think. It is true that in ancient times great kings and
emperors did exchange members of their family as hostages, but the policy
even then looked bad from both the human and national interest points of
view. Also as explained in Appendix II, ACD looks like a possible transi-
tional strategy to an arms control world.

7. Deterrence Plus Insurance (DI)

This is in the archetype of war survival (or as they are sometimes
called, war-fighting) strategies. Unlike the MFD and the WS strategies
(which also place a great deal of emphasis on the possibility that deter-
rence may fail), DI also hedges against the possibility that the enemy may

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[1]The editor once testified before the Holifield Committee (July
1961) and still believes that if both the Soviet Union and the United
States had an ability to protect every citizen and an assured recupera-
tion capability, both nations would still possess adequate Type I Deter-
rence. Neither nation would be willing, under almost any plausible cir-
cumstances, to risk losing the buildings and facilities in their great
cities--so valuable in economic terms and so rich in historical, senti-
mental, and cultural values. And in practice neither nation could be
certain that its protection and recuperation plans would work. Finally,
one would judge that the above deterrent is only "adequate." It is not
"approaching absolute" or even "reliable" (see pages 129-130). Therefore
both nations will have a good deal of Type II Deterrence as well (i.e.,
the situation is multistable).

fight an uncontrolled war if deterrence fails. (Actually WS also hedges against this possibility by strengthening, to an extreme, the deterrent against being uncontrolled, but it does not hedge with better active and passive defense against transattack or postattack deterrence failing.

Sometimes in the popular (or less careful) literature DI strategies are thought of as being an irrational compromise between Deterrence Only Strategies and the Calculated Type II Deterrence Strategies, because DI tends to have the foreign policy of the first and the posture of the second. But this combination can be a perfectly rational choice and not the result of an irrational political compromise. It is clear that the reactions of others to one's posture depend not only upon the posture but on estimates of such things as will, resolve, rationality, emotionality, and the intentions of the decision-makers. In particular, a nation can emphasize or minimize the possibility of extended deterrence. There is thus a very large difference between the War Survival Strategies and the Calculated Type II Deterrence Strategies, even though these differences show up mostly in the "soft" aspects of these central war strategies rather than in the posture, though some differences can, of course, also appear in the posture (e.g. the war survival strategies have little or no use for First Strike Only capabilities while the Calculated Type II Deterrence Strategies may well have a use for them, though the current U.S. Calculated Type II Deterrence Strategy minimizes First Strike Only forces).

However, as discussed later, War Survival Strategies clearly do have some extended deterrence in them simply because capabilities for a first strike exist, and the owner of these capabilities might adopt at the last moment an LSR, NMR, or other first strike action policy. Indeed, one could almost guarantee that the owner of a war survivable capability will have some secret war plans for the contingency of a counterforce first strike. So while we wish to emphasize the very important differences between the War Survival and the Calculated Type II Deterrence strategies, we also wish to note that these differences are not as great as a simplistic analysis might indicate.

We often call strategies MD, FD, MFD, WS, DI, EI, (and possibly ACD), prudential strategies, as opposed to CH, PMR, NMR, LSR, NCF, CP, CFS, (and possible ACD), which are often called Extended Deterrence strategies (i.e., strategies which try to use central war forces to deter more than major attacks on the U.S. and its forces). The use of the term prudential to describe War Survival strategies is an accepted practice. This unfortunately lends to the term extended deterrence an imprudent--e.g. an aggressive, militaristic or hostile connotation. This seems to be unfair, for many of the adherents of these so-called extended deterrence strategies are really defensive and non-aggressive and thus, in a reasonable sense, prudential. However, we feel the technical use of the term prudential is acceptable and we will continue to use it.

Some form of DI is probably the most currently popular Central War Strategy. And in the detente atmosphere that seems likely for the next few years or so, one rather expects increasing emphasis on this strategy

(or on MFD). Many believe that the United States is choosing an MFD or
DI strategy because of feasibility considerations, and we have quoted
McNamara and Kennedy (see pages 250-251), to the effect that the United
States does not ever expect to strike first with strategic forces (in
fact, the U.S. has named these forces "strategic retaliatory" forces).

Thus, in DI, the purpose of the strategic forces is to retaliate
if we are struck; but once we are struck we may wish to do more than
simply reply in some tit-for-tat reprisal fashion as in MFD. We may even
wish to win the war. Even if we wish to reply only with some measured
reprisal, we still wish to have a capability for surviving the war although
if the enemy becomes malevolent or uncontrolled.

If we have a deterrence by reprisal tactical doctrine, then the only
difference between DI and MFD is that we are depending less upon potential
reprisals limiting the opponent's strikes. We are more prepared if the
war blows up to survive it.

As we indicated in the MFD discussion, the difference between MFD
and DI is to some extent a question of degree and "who." For example,
under current programs, one would rather expect to see something between
50 and 100 million Americans be reasonably easy hostages to Soviet weapons--
but at some point between 50 and 100 million it would become very diffi-
cult for the Soviets to kill more Americans on the second or third wave
of the war. One can say, therefore, that we have a sort of MFD policy
for the first 50-100 million Americans, and a DI policy for the rest (be-
tween 100 and 150 million Americans). We would tend to characterize such
a posture as being basically MFD. It is only if the number of Americans
who are easy hostages on second or later strikes were brought down to 10
or 20 or possibly 30 million that we would think of characterizing it as
being in the DI region.

The hostages we are referring to do not include all those who could
be killed in a "malevolent" strike. Thus a policy could still be DI even
if there were potentially 100 million American fatalities in certain
extreme scenarios of surprise attack out of the blue, as in an Alpha-1
or Beta-1 scenario (see pages 140-142), but assume that the first strike
is largely counterforce or grew out of a scenario with warning.

Even if we do not go to any trouble of designing any first-strike
capability into our forces, unless we go to a good deal of trouble to
design this capability out of it, there will be some first-strike counter-
force capability left. In particular, if an opponent does not design his
system well, then even a primitive system, perhaps one designed for an
MFD objective, could have a good deal of counterforce capability. This
is part of the reason why we indicated in the chart on page 225 that the
DI strategy had some first-strike threat (and even the MFD strategies
were in the ambiguous region). The rest, as already discussed, is because
whether a policy is NCF or DI depends on the scenario as much as on the
posture.

8. Expanded Insurance (EI)

This is the most war-capable and technically competent of the purely
prudential policies (where the term prudential implies that the forces
are being procured to negate the other man's force In a purely defensive
fashion, at least as far as normal foreign policy considerations are con-
cerned, and not for purposes of extended deterrence--at least as far as
deliberate policy is concerned).

Because EI is so prudential, it is not only concerned with the same
problems that DI is concerned with, but with more; and it has higher
standards of performance. An EI strategy might strive for greater deter-
rent capabilities both because of worrying more about intense crises,
such as the Gamma-1 scenario, and in being able to increase the likelihood
of a controlled war occurring if deterrence fails. It could resemble WS
in this respect.

Expanded Insurance strategies seek "assurance," partly through being
able to deter war and partly through preparations to be able to fight and
survive wars. This desire for very competent forces and equipment--in-
cluding active and passive defense--is to be distinguished from the de-
sire for Improved War Outcome in the various first-strike-threatening
strategies. In EI the idea may be something like the following: We may
have to deal in a crisis with all kinds of people and nations; we may
have to face opponents with special kinds of resolve deriving, for ex-
ample, from ideological fanaticism, extreme nationalism, personal neuro-
ticism, or extreme internal pressures. Against these kinds of opponents
we, as a democracy and as a rich status quo power, may not be able to
match resolve. Therefore, in order to stay even, to avoid being pushed
around by exploitation of the danger of war, we need to be in a very good
material position; in particular, to sustain our resolve in a crisis, we
need to be convinced that if necessary we can fight and survive a war.

Note that, in theory, this concern for "assurance" might be indif-
ferent to how our forces actually will perform in a war, and even to the
enemy's beliefs about our force. Of course, in practice we would in fact
be concerned about these things, although this strategy, for arms control
or political purposes, might well want to understate its expected wartime
capabilities, i.e., it will have an MFD or DI declaratory policy.

Thus, though EI worries about the problem of the preventive (Just)
war, or dealing with unorthodox opponents, and wishes to have a capability
of doing so, it does not wish to broadcast this capability. It tries to
achieve such capability by getting higher quality rather than showy equip-
ment. Thus in some ways EI is the exact opposite of the SC strategy. It
tends to be interested in objective capabilities and relatively disinter-
ested in political benefits. Sometimes it finds these last a disutility
because it fears accelerating an arms race or arms competition or fears
to appear aggressive.

The reason why more Type I Deterrence, preventive war potential, and
unorthodox opponents go together is because the strategists who support

this policy tend to worry about dramatic and tense crises.

The editor would, if the Europeans and the Japanese were able to handle their own defense against potential Soviet aggressions, tend to opt for EI as the best strategy for the United States. (Under current conditions he tends to favor an NCF policy, as discussed below.) Because EI is interested in objective capabilities which do not look aggressive, it will emphasize such things as reliability, flexibility, good command and control, realistic training, good planning, the creation of good strategic and tactical doctrine, and the orientation and education of the top decision-makers to exploit the capabilities that they will have available. It intends to make up any lack of quantity by a high level of skill and expertise. This is, after all, the traditional way to win wars--even against larger opponents.

Other things being equal, EI might prefer investing billions in making postwar recuperation more reliable than in more counterforce capability because the first, while it increases objective capability, is less likely to "provoke" enemy reaction than offensive missiles. For similar reasons EI would also emphasize preattack mobilization bases.

9. Contingent Homicide (CH)

This strategy is important for more than conceptual reasons. It is very close to the old official NATO strategy for defending Europe in which we simply warned the Soviets that if there were any attack in Europe, nuclear weapons would be used on a large scale and in a more or less uncontrolled fashion--and that everything would likely blow up and at least they would be obliterated from the face of the earth. We did not ask what would happen to us (i.e., what were the counterthreats?). Of course, in the mid-fifties we would probably have been able to survive any damage which the Soviets might have been able to inflict on us; but nobody had done a study to show this or even make it plausible. The CH policy today is interesting because some people think the Soviets may follow this policy. In fact, Khrushchev actually said in his January 14, 1960, speech to the Supreme Soviet:

> I am emphasizing once more that we already possess so many
> rocket weapons both atomic and hydrogen, and the necessary
> rockets for sending these weapons to the territory of a poten-
> tial aggressor, that should any madman launch an attack on our
> state or on other Socialist states we would be able literally
> to wipe the country or countries which attack us off the face
> of the earth. (The New York Times, January 15, 1960.)

CH has some similarities to the Massive Retaliation strategies discussed later. It tries to make up in massiveness and frightfulness whatever it may lack in credibility. It is important even when it is not a declaratory or official action policy because it may occur as a result of a more or less "unintended eruption." Even more important, a number of people who think of themselves as adherents of finite deterrence strategies, and are thought of as such, assume--sometimes unknowingly--that

finite deterrence includes "retaliation" against a Russian "first strike"
against allies, e.g., an attack with conventional (or conventional plus
tactical nuclear) weapons in Europe. The basis for inclusion of this
response as part of "Type I Deterrence" is either not justified or spe-
cifically acknowledged, or it may follow from such ideas as "an attack on
France is the same as an attack on the U.S."

We would not call a strategy which deliberately, consciously, and
understandingly tried to protect Europe by threatening an attack on the
Soviet Union in response to a Soviet attack on Europe, a finite deterrence
strategy. On the other hand, many followers of finite deterrence strate-
gies do essentially that, through confusion or through "special" defini-
tions. The leakage between the concepts of finite deterrence and what
we could call first-strike-threatening strategies comes in the definition
of "first strike," "retaliation," and "the U.S." or "homeland." Thus if
one says, "an attack on any member in the Alliance is equivalent to an
attack on all," one may be saying, in effect, "France is part of the U.S."
for purposes of interpreting the scope of our deterrence. In such cases
we have invariably found that the advocate wants a spasm, LSR, or limited
local response. We will call the first (spasm) group advocates of CH.

10.   Limited Strategic Retaliation (LSR)

We have already said that any one of the strategies could potentially
contain an LSR option. One can always threaten or actually launch a mis-
sile at some valued object of the opponents in reprisal or retaliation
for some provocation by this opponent. (Note that we are assuming the
strategy is essentially defensive--there are also offensive forms.) The
LSR strategies are distinguished by making this possibility of limited
reprisals the cornerstone of policy, either declaratory, or action, or
both. LSR can be combined with such a large range of postures and doc-
trines that we may create some confusion by naming it as a separate stra-
tegic theme; normally it will be combined with some other theme which can
range from MD to CFS.

There has been a good deal of discussion of the utility of LSR in
the literature. In most cases this discussion has been related to an
approaching or assumed parity and nuclear stalemate between the United
States and the Soviet Union. Actually, LSR could be a superior strategy
if used by a nation in a superior position but which is, nevertheless,
deterred from launching a large attack for various reasons. If the Chi-
nese threatened this country, the United States, having escalation domi-
nance on the upper levels of the escalation ladder, would simply destroy
the Chinese strategic forces. Thus one can easily find circumstances
where the United States, while willing to perform some LSR type of vio-
lence, might not be willing to go the limit. For example, if the Chinese
happened to launch a nuclear weapon on Okinawa or Formosa or Japan, we
might easily launch a hundred weapons in retaliation, carefully targeting
them against Chinese military forces. This is more than reprisal, it is
overreprisal. One might think it was reprisal plus exemplary attack or

retaliation. Or our response might be combined with various of the in-
strumental attacks discussed earlier (see pages 197 and 206-208). For
example, one can also imagine that if the United States used this stra-
tegy against the Chinese it would (perhaps correctly) expect the exchange
to terminate quite rapidly.

While LSR strikes most people today as completely bizarre, it is,
in fact, a traditional form of warfare, except it now might be called
nuclear gunboat diplomacy rather than just gunboat diplomacy. Confron-
tations between two large powers are being emphasized rather than between
large and small powers, and the actions involved may cause not a few
deaths but, possibly, very great destruction by traditional standards.
However it is not difficult to imagine that the 20th century could see
a revival of this form of gunboat diplomacy. It should also be fairly
clear that if this type of thing were done very often between civilized
nations it would soon come to be seen as unprofitable: indeed it might
lead to a convention whereby money was paid over rather than allowing the
aggrieved side to carry through with the mutual destruction of cities.

LSR is actually an implicit part of many FD, MFD, and DI type stra-
tegies and is one of the reasons why these last strategies might work in
the real world. One problem that occurs is that the exponents of these
strategies almost never really understand the important role that LSR
actually plays in the back of their minds. That is, somehow they know
that if the other side did something outrageously provocative they would
be able to invent some tactic to punish them (i.e., they would invent
LSR). To this extent, many of the relatively naive protagonists of the
purely prudential and pacifistic deterrence strategies have a much better
case than they realize, and the fact that they don't know about this last
possibility and thus do not actually use it as an explanation probably
also improves their case--at least for public consumption.

11. Not Incredible Counterforce First Strike (NCF)

This is the "weakest" of the strategies which (NCF, CPW, and CFS)
emphasize "calculated" Type II Deterrence (the word calculated has been
put in quotes to indicate that there will very likely be many uncertain-
ties in both the assumptions and calculations that one must make in order
to determine how credible the Type II deterrent will be). However, to
the extent that one side has high quality strategic forces and understands
both the other side's strategic capabilities and the kind of responses
that the other side might make under varying conditions, then the threats
that one would make with one of the calculated Type II deterrent positions
will not depend on pure irrationality. The other side's behavior will
then be regulated by some degree of threat (where the credibility of the
threat will depend partly on how much resolve and commitment we appear to
have), and by some degree of warning (where the term warning is used here
in the sense that Schelling would use it: the credibility of the warning
to the other side will depend on how clearly it understands the extent to
which it is jeopardizing U.S. National interests, and not on how much re-
solve, commitment, or objective capability is used to back up the U.S.
threat).

Advocates of Type II Deterrence capabilities range from those who like it because they believe that it provides a relatively cheap way of preventing enemy gains to those who like it because they believe that it provides the only or least undesirable way of preventing enemy gains by nuclear blackmail tactics in certain crucial areas, particularly Western Europe. These advocates do not find the use of central war capabilities "unthinkable." They feel that such capabilities should be used (in some appropriate manner or level) as a threat or as a continuation of policy by other means. Therefore, in addition to all the complexities of trying to estimate how a war can come out, the decision-maker must also estimate alternative risks--often the risk of immediate violence versus the later danger that accommodation or retreat might bring. Adherents of these positions generally argue that it is necessary to have a capability to limit provocations and limited wars which is greater than that which is available through Soviet self-restraint or the use of programs in the other areas of national security or military policy. Sometimes these Type II Deterrence capabilities are thought of as a supplement or complement to these other areas and sometimes as a substitute for them.

The Not Incredible Counterforce First Strike is the least aggressive of the "Calculated" Type II Deterrent set and simply, as the name implies, tries to make clear to the other side that it is not incredible that if provoked the United States will go to "all-out" war; this threat is made a part of both the declaratory and action policies. The strategy achieves this not-incredibility by greater reliance, however, on objective capability than in, for example, the strategy of Not Incredible Massive Retaliation and on resolve than Contingent Preventive War described below.

Indeed the three strategies NCF, CPW, and CFS differ from each other mainly on how much resolve or commitment and how much objective capability are combined in the strategy in support of any first-strike threats.

In the table below there is a simplified and schematic comparison that indicates the degree of resolve and degree of objective capability that might be required in each of the strategies in order to give credibility to the Type II deterrent.

<div align="center">

Total (Metaphoric) Units of Credibility
(for Some Provocation)

</div>

STRATEGY	UNITS OF RESOLVE	UNITS OF CAPABILITY	DECISION-MAKER
NCF	8 5 2	2 5 8	de Gaulle? Johnson or McNamara? Many Colleagues
CPW	0	5-20	"Computer"
CFS	15 10 5	5 10 15	

It is evident from this table that the essential differences between
Not-Incredible Counterforce First Strike and the Credible First Strike
is one of degree, both with regard to resolve and objective capability,
but that the Contingent Preventive War strategy will involve essentially
zero units of resolve, moderate to excellent objective capability, and
first-strike threats that are made only when it is clearly in the U.S.
national interest to do so. The Contingent Preventive War strategy then
depends completely on deterrence by warning.

The reader will by now be aware that it is the editor's judgment
that NCF is our current position and that it is desirable for us to main-
tain it. This judgment in turn is based upon a judgment that the Soviets
could not, and would not expect, cynically and brutally to use European
hostages to blackmail us in any large range of crises. The editor be-
lieves that as long as the U.S. is going to use Extended Deterrence stra-
tegies, the use of the Not Incredible Counterforce First Strike threat or
warning is going to be a far more usable instrument of policy than any
form of LSR without escalation dominance.

However, we have already pointed out that NCF is not opposed to LSR
but, in fact, a very useful context in which an LSR type strategy can be
used. And in general NCF may help provide the kind of escalation domi-
nance or adequacy that may be essential to many kinds of crises or foreign
policies that the U.S. may become involved in. Because the analysis of
NCF is complicated and the requirements are in some ways complex and dif-
ficult, the editor feels that the theorists have tended to neglect this
strategy even though it is both national policy today and not unlikely
going to continue to be national policy. It has, of course, been recog-
nized that the Soviets, by making some great efforts, can go a great
distance to negate this strategy and convert the NCF to something between
MFD and DI. It is, however, not at all clear that practically the Soviets
are really capable of doing this--partly because they lack the motivation
(their strategic requirements are different from ours) and partly because
they may lack the skill. Thus the degree of feasibility and desirability
of NCF is likely to be one of the central issues of the strategic debate
during the Decade.

12. Contingent Preventive War (CPW)

To some degree this is the declaratory policy of the United States.
That is, a large number of senior Americans at various times have stated
that Europe is so important to us that in its defense it would be in the
national interest for us to attack the Soviets no matter what the conse-
quences. In principle, of course, this could not be true independently
of details, because presumably if the Soviets could and would annihilate
every single American, it simply would not be in our national interest to
attack them if they attacked Europe. But some form of this position is
held by many Americans (see, for example, the statements by McNamara and
Kennedy on pages 250-251). Actually, in practice, our actual response to
a Soviet provocation is going to be a mixture of calculation, resolve, and
committal.

13.   Credible First Strike (CFS)

We have included this strategy mainly for historical reasons and
because there are some people who think the United States should attempt
to achieve this position. That is, they wish to have such a massive and
obvious capability for overwhelming the Soviet strategic forces that we
can credibly and effectively use the threat of a first strike to curb
very many kinds of provocations, some of a relatively low order. We have
never really had this capability, even at the peak of our comparative
advantage over the Soviet Union (which was probably around the mid- '50's),
or even in the period when the Soviet Union had no nuclear weapons. There
is a good deal of self-deterrence in nuclear weapons. In addition, for
most people the European hostage did play a sufficiently strong role to
prevent us, or deter us, from carrying through a first-strike threat.

14.   Pure Massive Retaliation (PMR)

This strategy is also included partly for historical reasons and
partly because its implicit threat always exists. However, it is probably
best to discuss this implicit threat in the less incredible form of the
next strategy. PMR was popular when people measured deterrence by the
"what threat" without worrying about the "in the face of what counter-
threats." We are now only too clear that the credibility of massive re-
taliation type threats can be diminished to the vanishing point by fear
of counterthreats. If anything, we are probably too confident that
nations will not easily launch their strategic forces at enemies that
can retaliate effectively. This is one reason why de Gaulle's Force de
Frappe seems to many as unlikely to be an effective instrument of policy;
but given the previously discussed Minimum Deterrence arguments and the
possibility of sophisticated use of the force, it may well turn out to
be more useful than most experts seem to believe.

15.   Not Incredible (or Mostly) Massive Retaliation (NMR)

We could call this strategy Mostly Massive Retaliation in accordance
with the way we labeled the Finite Deterrence strategy Mostly Finite
Deterrence, NMR being in about the same relation to PMR as MFD is to FD.
However, the crucial point of this strategy is not that it has blurred
the harshness of the Massive Retaliation position but that it attempts to
make the possibility of such retaliation not incredible, i.e., the double
negative is used to put the burden of proof on the person who denies that
this threat would be carried through. He must show it to be incredible.
NMR strategies are probably feasible to some degree, though probably both
the French and the Chinese may have more difficulty in making effective
use of them than their governments would now believe. However, in the
Omicron Worlds we already mentioned, in which every nation is armed to
the teeth and in which war has been more or less abolished, it is likely
also going to be true that many provocations are going to be abolished.
The fear of retaliation, massive or limited, rational or irrational, will

always exist. To some extent the widely held belief--that if one has a
stable deterrence situation in the sense of two nations with nuclear
parity and massive second-strike capabilities, one can use this parity
as an umbrella under which to make many kinds of provocations--may not
be correct. The potential of Massive Retaliation as well as LSR still
exists and an NMR policy might actually be pursued in action. In general,
there will be a certain tendency not to analyze but simply to stay away
from the possibility of anything happening. Because a certain amount of
NMR can be part of almost any policy, the "Don't Rock the Boat" and
higher thresholds are greatly strengthened.

A Comparison of the Five Major U.S. Central War Choices

On page 37 of Chapter II we presented a preliminary table of tenta-
tive evaluations that arise in comparing MFD, ACD, DI, EI, and NCF stra-
tegies. We would like now to go through the same comparison in a rela-
tively systematic way, using the organization of the Seven Levels of
Analysis for this comparison. Before doing this the reader might remind
himself (see pages 54, 56 or 58) of the distinction between (a) descrip-
tion, (b) metaphor, (c) setting objectives and criteria, (d) scoring,
and (e) reporting.

It is also useful to distinguish between a declaratory policy, the
image created by a policy, a contingency plan, and an expected action.[2]
The declaratory policy is the official image that one is trying to pre-
sent to the world--usually expressed in open official statements, and in
other ways. The image is the actual perception of some relevant group.
The contingency plan is what the official response calls for; and the
action expectation or policy is what would, in fact, be done. It is
clear that these distinctions are related to the distinctions we made
previously between reporting, scoring, and setting objectives, though
they are far from identical. For example, one could have as objectives
quite different declaratory policies, images, contingency plans, and
action policies.

One important use of the ACWS typology is in metaphoric scoring of
a country's potential action policies (e.g., "In fact this nation may act
like NMR" or "It is true they tried for DI but when one looks at it it is
really MFD") as opposed to just observing its declaratory policies or even
its actual objectives.

It should also be clear that while the four categories of policy
can, to some degree, be independent, they are not completely independent,
and some of the independence that can be obtained can only be obtained
at a price. In particular, the action policy may well be completely

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[2] We will usually refer to this expected action, if it seems almost
inevitable or very probable, as the action policy, even though it may
not actually be the policy of anyone in authority. One might also wish
to add "intentions" to the list of concepts, but for most purposes the
"intention" is either ambiguous, undefined, or irrelevant.

determined by the contingency plans if there is no chance to improvise anything different, or if no one has thought of anything different. In any case, the declaratory policy, the image, the contingency plan, and the action policy will be constrained to some degree by the actual physical postures.

Assume now that we have the declaratory objective of doing "X." The actual strategy can be designed as follows:

1. so that X will inevitably be done (declaratory policy, contingency plan, action policy, and probably image are all the same);

2. so that the only choices are X or nothing;

3. with no attention paid to making sure that anything besides X is feasible, yet one has, unintentionally, improvisable capabilities (declaratory policy and contingency plan agree, but action policy may not);

4. hedged so that X is done if it seems the proper choice but other alternatives are clearly available;

5. with decision deferable so that if X is not done immediately it may be done later;

6. with the choices completely open (i.e., declaratory policy had no relationship to action policy);

7. with the intention of doing Y instead of X;

8. so that one can not only plan to do Y but fix it so that it is not possible to do X;

9. so that Y will inevitably be done.

In the last three cases there is a direct objective conflict between the declaratory and contingency (or action) policies.

We will assume in what follows that the reader will usually be able to tell from the context whether the discussion applies to over-all description, objectives, scoring, or reporting, and whether the policy is declaratory, contingent, or action. In this final discussion, the editor will allow himself the privilege of extensive editorializing.

Levels One to Three: The National Goals

All of the five strategies are basically defensive and reasonably prudential (though we usually restrict the term prudential to strategies MFD, DI, and EI, which do not attempt to get any "offensive" foreign policy benefits out of the possession of strategic forces; actually even NCF is only conceived in terms of deterring or correcting aggressions).

Only the EI and NCF strategies make specific provisions for using strategic forces for the protection of allies. Adherents of the others may or may not have the same concern for this problem, but, to the extent that they do, they assume that these problems can be handled by non-strategic forces (or they include, implicitly, an LSR or NMR capability to deter the most extreme provocations). In particular, as far as NATO alliance problems are concerned, the MFD strategy clearly promises the alliance relatively little in the central war area; that is to say, its central war policies no longer justify U.S. leadership of NATO and may even provoke the dissolution of the existing alliance. It is true that the United States might still make major troop contributions to Europe, but troops are not primarily what most Europeans want from us (except, perhaps, as a reliable trip-wire for SAC). The editor would conjecture that an MFD strategy makes one or more independent nuclear deterrents in Europe inevitable (as a DI strategy probably also does). NCF is the only strategy that is really compatible with the traditional form of the NATO alliance; and even it now seems unlikely to be enough to preserve this form.

It is, of course, important to note that even though our Central War objectives are nonaggressive, the enemy's image (or scoring) of our strategy may be quite different. However, all of the strategies are indeed basically nonmilitaristic. They are all very concerned with preserving the rules of the game (i.e., with systems bargaining). The MFD, DI, and perhaps ACD policies would tend to create or be consistent with systems in which all-out strategic war is unthinkable--i.e., is not part of the system as in an Omicron World. The EI and NCF strategies will typically argue that all-out war is justifiable in response--but only in response-- to the other side's "breaking the rules"; i.e., the strategies attempt to impose serious and effective sanctions and correctives if the rules of the system are violated.

All five of the strategies are or may be seriously concerned with limiting arms races and the arms competition: MFD by making it unnecessary for the other side to compete (it is either a unilateral or bilateral initiative for arms control), DI and EI by trying to pursue non-central war policies that limit the arms race impact of the central war posture and by limiting the pressure on the Soviet Union to compete in the central war area. ACD by definition is dominated by arms control considerations; and NCF, by limiting its ambitions to attain a usable superiority or threat to a very low level of credibility, may be at least affected by arms race considerations.

The actual impact of the different ACWS's on the arms race will depend, among other things, upon the character of the opponents. One can make an argument that strategies such as ACD, NCF, EI, and to some extent DI, which require elaborate and expensive postures, may do more to ease the arms race than the strategy which is most dominated by arms race considerations, MFD. The argument is that the former strategies, by making it difficult, hopeless, or impossible for others to compete effectively dissuade such competition, while MFD may make it easy for opponents or future Nth countries to get into the strategic business.

While all five strategies are consistent with a policy of national
power and influence and of the preservation of national sovereignty, they
are also consistent with working towards various other types of world
order to be achieved in evolutionary fashion. We have also indicated
that with the possible exception of MFD, all the strategies would be sen-
sitive to how the world might be changed by violence and with the kind
of peace treaties or cease-fires that might be sought if war occurred.

Different adherents of the various ACWS's draw different lines for
contingency plans and action policies. For example, those adherents of
MFD and DI who specifically reject resort to LSR or NMR (in order to deter
extreme provocations) have in effect said that they will not use central
war capabilities to defend themselves or the national interests (see quote
from Pope John XXIII on page 252) even if the enemy does things which
would seem to require such a reaction. They, of course, may rely on the
other areas of the basic national security policy and military policy--
particularly various types of limited war capabilities to handle most of
the problems that arise, even though these other capabilities may not be
able to handle certain kinds of extreme provocations. On the other hand,
to the extent that MFD and DI adherents are depending on LSR and NMR
action policies in certain situations, or even the implicit threat of
such action policies to deter the opponent, they are in effect using more
extreme action policies than the ACD, EI, and NCF adherents might use to
cope with the same provocation.

It is, of course, possible for the MFD or DI adherent to eat his
cake and have it; he may argue "I have absolutely no intention of using
these forces unless struck and possibly not even then," but the enemy
cannot be sure; and because he cannot be sure, the deterrent benefit of
these forces may be enjoyed even though the defender's intentions are not
to use the forces, or at least not in unacceptable ways. To the extent
that there is a zero probability of the use of LSR or NMR, we believe
that this moral position may be justified. But as we tried to point out
in the first chapter (page 9), to the extent that the threat of war (or
other action) is credible, it is probably so because an actual non-zero
probability of war (or other action) exists. To some degree, using a
probability of an action is using a part of the action. Thus one may, in
effect, be using war or a disallowed tactic such as LSR or NMR (which the
opponent could judge to be a potential action policy) to make a declara-
tory or official MFD or DI policy work satisfactorily.

Probably the largest advantages of the MFD and DI policies over EI
and NCF are the very peaceful image they project and their simplicity of
both posture and strategy. EI and NCF do not have these virtues. They
are militarily complex, difficult to justify, potentially aggressive, and
might accelerate the arms race in the simple spiraling fashion that so
many fear. As a result the necessity for debating their complicated jus-
tifications in public seems to create a very high political disutility.
The editor feels, perhaps unjustly, that some supporters of MFD or DI do
so because it is so much simpler to relax and fall back on the simplicity
of strategic parity and nuclear stalemate than to endure the complexities
and ambiguities of EI or NCF. Indeed, it is so much easier to justify MFD

if there are no "felt" dangers that, as we indicated on page 37, we
argued that MFD is almost "inevitable" in the Beta World, while DI would
require some degree of statesmanship, and EI and NCF a very high degree
indeed (assuming that it were to be desirable and feasible to achieve
DI, EI, or NCF). In other words, if MFD is desirable and feasible, it
is also simple to achieve, while if one judges EI or NCF to be desirable
and feasible one will still have to cope with serious political, techni-
cal, and other problems before he can achieve his objectives.

We also have argued that all the strategies have a reasonable sta-
bility in terms of reciprocal fear of surprise attack, though many would
argue that if there is a first-strike advantage then the EI and NCF stra-
tegies may not be as stable against reciprocal fear of surprise attack.
But as we indicated in the discussion of multistable deterrents (pages
122-123), some first-strike instability, even in a parity situation,
would be desirable, and most likely a U.S. EI or NCF policy in the Decade
would not be faced with parity.

Level Four: Political-Military Objectives

All five of the strategies, unlike many of the other ones (which we
have suggested are not to be taken seriously as choices for the United
States), are controlled war, controlled response, restrained warfare
strategies. NCF, EI and DI are very interested in escalation adequacy
or dominance. MFD strategies are weak in creating or supporting escala-
tion dominance in general and especially so against unorthodox opponents.
(One suspects that if a nuclearly armed Hitler ever challenged a nation
with a MFD strategy, either both nations would be wiped out or Hitler
would win; and neither choice is very attractive.) It is, in fact, their
preoccupation with unorthodox opponents and escalation dominance needs
that gives the EI and NCF adherents their major argument.

All the strategies are concerned with the tone and style of American
policy, though NCF and EI give more attention to the Assurance role of
strategic military forces.

Level Five: Requirements, Purposes, and Criteria

All five strategies agree on the need for adequate Type I Deterrence
to protect ourselves and our forces from major attack, where "adequate"
includes a need for a good enough Type I deterrent to stand the strain of
crisis (though EI allots much more attention to this than the other stra-
tegies do).

Another important class of considerations has to do with the after-
effects if deterrence fails. There are two general cases here--when the
failure results in a controlled war and when it results in an uncontrolled
war. In the first case, there would likely be relatively little civilian
damage resulting from the war. However, one tends to feel that the cease-
fire or peace treaty which terminated the war is not likely to settle

most of the outstanding issues and thus is likely to lead to an arms race
rather than a detente, though this feeling could be wrong. The DI, EI,
and NCF strategies lead to a large range of possible estimates for civil-
ian damage if deterrence fails, because the war is more likely to be bit-
terly fought, even if controlled, and there are thus more opportunities
for cities to get hit and there may be some city busting as part of the
bargaining. But these strategies are also more likely to lead to a set-
tlement of the issue at stake.

If the war is uncontrolled, then MFD is likely to lead to the near
or total annihilation or destruction of the country, while all the other
strategies will likely have some reasonable degree of capability for the
nation to survive this worst of all circumstances.

We will not discuss here the next two levels (the three top items on
the chart on page 37)--military systems, technical feasibility, and cost.
These discussions are deferred to the classified reports. However, in
order to give some (necessarily inaccurate) indications of the substance
of the debate, we will comment briefly on the postwar history of the S.U.
and U.S. and some of the future possibilities as indicated on page 27
(U.S.-A, U.S.-B, S.U.-A, S.U.-Bl and 2, S.U.-C).

Both countries have spent similar proportions of their GNP's on mil-
itary preparations, in the early fifties almost 15%; today slightly more
than half that percentage. Most people expect that in the Decade the per
cent will continue to decrease sharply, the absolute amount to decrease
slightly (i.e., we live in a Beta World). However, in the central war area
the decreases are likely to be even more dramatic. In the late fifties
the U.S. spent about 3% of its GNP ($12-$15 B) on the procurement opera-
tion, and maintenance of central war forces. We now expect to be spending
about half that sum per annum. For this we would expect to procure about
U.S.-A: the Soviets in turn to procure something like S.U.-A. For something
like classical percentages of its GNP (2-3%) the U.S. could procure some-
thing like U.S.-B. If the Soviets responded with S.U.-Bl or -B2 the U.S.
could probably support a DI, EI, or NCF policy. If the S.U. responded
with S.U.-C (which they could probably do within classical (per cent of
GNP) budgets), the U.S. would be sorry they ever started the competition--
both nations would be better off it they had both stayed at A. However,
the editor is willing to argue that he can put together persuasive argu-
ments that the Soviets are more likely to react with B than C.

The Growth of Distinctions

It might be useful at this point to consider again the fifteen al-
ternative strategies and some simple relations between them. We indicated
in Chapter II that by the late fifties, analysts and some decision-makers
were fairly clear on the distinction between Finite Deterrence (FD) and
the Deterrence Plus Insurance (DI). The were not very clear on the vari-
ous forms of extended deterrence but we can simply lump all the concepts
together under the title "Credible Massive Retaliation" (CMR). That is,
all the concepts involved some degree of credibility that if the Soviets
provoked us enough we would retaliate in some massive way on them.

Late Fifty
Classifications

Late Sixty
Classifications

FD

DI

CMR

MD ──────────────► SC

FD ──────────────► CH

MFD ─────────────► WS

ACD

DI   Current U.S.
            Possibilities

EI

NCF

CPW

CFS

LSR   Universal
       Sub-
NMR   Themes

PMR

Extended
Deterrence
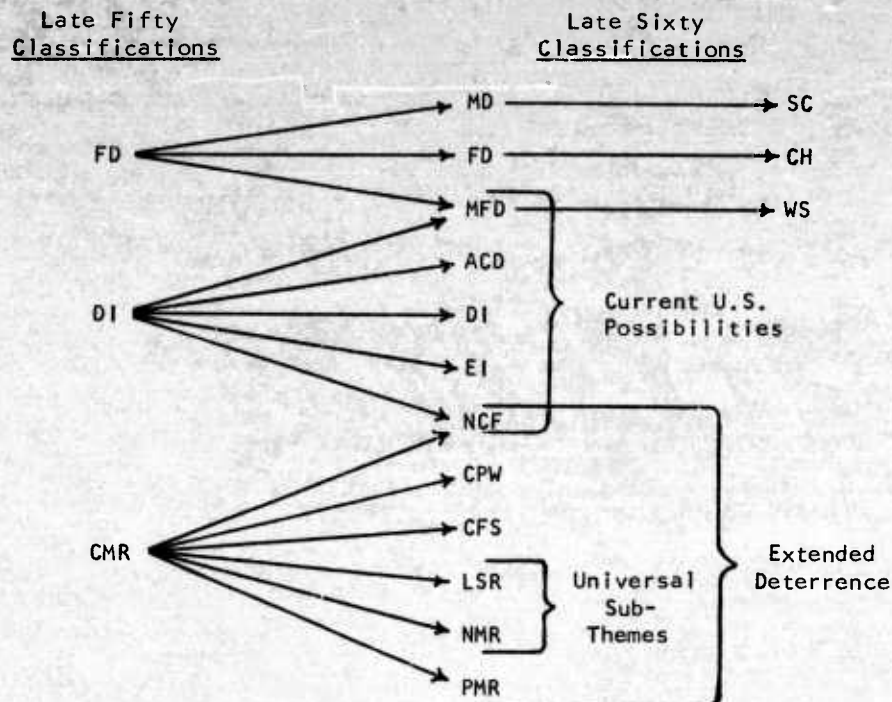
    Today, as indicated in the chart above, these three strategies have
proliferated into about fifteen reasonably distinct themes, any one of
which could be a strategy by itself, though some of the themes can be
mixed. Finite Deterrence (FD), in addition to continuing to exist, has
given rise to two other immediate descendants: Minimum Deterrence (i.e.,
deterrence by uncertainty, by threshold, by philosophy, by superstition,
by faith, or by something other than objective calculation) and Mostly
Finite Deterrence (MFD)(which is also descended from DI). MFD has most
of the arms control, feasibility, and image attitudes of FD, but mixed
with it is some of the prudence (and realism) of DI. Each one of the
three descendants of FD has given rise to an additional descendant of its
own. MD, which does not take deterrence seriously, is easily converted
into Strategy as Currency (SC). FD can increase its potential capability
until it threatens homicide; then one tends to look around for some addi-
tional areas to cover with the threat, typically Europe. MFD, in its ex-
treme form, becomes a War Stopping Strategy (WS). The DI strategy has
five descendants, one of which, MFD, we have already discussed. We need
say little about the other four except to point out that DI shares one of
its descendants, NCF, with CMR. CMR has, in addition to the NCF descendant,
five other descendants all of varying degree of credibility, massiveness,
and usefulness. Two of the descendants, NMR and LSR, are potentially uni-
versal policies; in some sense all of the other thirteen strategies have
these themes at least implicitly, but we feel they are also worth a sepa-
rate label simply because they may be major themes in their own right

rather than minor sub-themes. We have argued that as far as the U.S. is
concerned, of the six extended deterrence strategies, only NCF is really
likely to be officially considered; but NMR and LSR are, of course, always
there.

There are doubtless other strategies or distinctions which one might
consider; particularly, there are a number of DI strategies which are ac-
tive contenders and could easily deserve separate names in themselves; but
as far as we know, the above fifteen strategies seem to cover comfortably
all the empirical, descriptive, and metaphoric uses that we need for the
various positions that are held. They also seem to be sufficient for other
objectives such as setting criteria and objectives, reporting, or scoring
(see pages 54-56).

Some Possible Correlations of Alternative Future Worlds (AFW's) with Alternative U.S. Central War Strategies

We will conclude this report with a summary listing of some possible
relationships between ACWS's and AFW's. The chart below indicates some of
the possibilities if the U.S. reacts to "felt" needs (as seems plausible);
there is no implication that the "prediction" accords well with "objective"
U.S. security needs. The (X) indicates a likely possibility, the (?) less
plausible but not unthinkable, and the (-) a most unlikely if not impossible
choice.

World Future / Central War Strategy	Alpha	Beta	Gamma	Delta	Epsilon
Minimum Deterrence (MD)	?	-	-	-	-
Finite Deterrence (FD)	X	?	-	-	?
Mostly Finite Deterrence (MFD)	X	X	?	?	?
Arms Control Through Defense (ACD)	?	?	?	-	-
Deterrence Plus Insurance (DI)	?	X	X .	X	X
Not-Incredible Counterforce First Strike (NCF)	-	?	?	X	X
Credible First Strike (CFS)	-	-	-	?	X
Contingent Preventive War (CPW)	-	-	?	?	X
Limited Strategic Retalia- tion (LSR)	-	?	?	X	X

While the choice of entries in the table is more or less obvious, it may be a useful exercise for the reader to verify them. If we tried to be more specific or prescriptive rather than vaguely predictive, we would have to go into an extensive discussion of various BNSP's (as discussed in Chapters III and V) and their relationships to various ACWS's. A preliminary discussion of this problem, with detailed suggestions and conjectures about R&D and procurement is given in HI-308-RR.[3]

We are now ready to embark on a serious study. This seems like a good place to terminate this preliminary report.

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[3]Martin Zlotnick, <u>An Assessment of Technological Prospects in Varying Political and Strategic Contexts</u> (U), HI-308-RR, Harmon, N.Y.: Hudson Institute, November 19, 1963 (Secret).

APPENDIX I

RELEVANT CONCEPTS AND LANGUAGE FOR
THE DEBATE ON CENTRAL WAR STRATEGY

The present national security debate often suffers from the use of terminology that is imprecise, inconsistently used, or emotionally laden. More important yet, it often suffers from the fact that the terminology in use is inadequate--failing to make specifically available enough concepts and distinctions. Terminological difficulties and ambiguities affect the professional discussions of decision-makers and experts as well as public debate. Too often, at conferences of experts, terms that represent simple concepts have to be explained at great length, or names for needed concepts must be invented and then tentatively defined, or relatively simple distinctions must be made or elaborated--all usually in a confusing or otherwise inadequate way; often the major purposes of the conferences are impeded or frustrated as a consequence.

The situation cannot be made perfect, but it can be improved: most of the concepts, terms and distinctions used in the national security debate can be made both clear and useful; where new concepts and distinctions are needed, they can be developed; the number of shared understandings and explicit formulations can be increased. Ideally, what is required is a language and set of concepts which are:

1. precise enough to describe and communicate accurately;

2. large and complex enough to cover comfortably the relevant universe of discourse and discoursers;

3. simple enough to be usable;

4. acceptable to the relevant communities.

Although such a program is only a part of the task of developing a comprehensive analytic framework for thinking about national security, it is an almost indispensible first step. It is also a difficult step; so difficult that it is unlikely that any single organization will produce such a language and set of concepts (though it is certainly one of the major aspirations of Hudson to do so).

We have not attempted such a thorough formulation in this report. We have used many standard terms despite their ambiguity or unfortunate connotations. However, we have defined and named a few new concepts and, where it seemed useful, we have discussed some of the problems and issues raised by some old concepts and terms. In this appendix we will review the terminology of this report (or introduce it: the reader may study this appendix before he has read the main report).

We will consider the terms and concepts in ten related categories as listed below. If a term is set off by parentheses, then the term is not really part of the category but is listed for the sake of emphasizing that it is not part of the category. If part of a term is in parentheses, then that part is judged to be partly or completely redundant, though it may be retained in practice.

We will list all the terms in the ten categories:

1. Deterrence versus denial, warning vs. threat, force vs. violence, spasm vs. control, ostensible vs. real crisis, barely workable vs. almost absolute deterrence, contingency design vs. simple advocacy, escalation (theory) vs. limited or general war.

2. Accidental War, Unintended War, Inadvertent War, Unpremeditated War, (War by Miscalculation)
   Catalytic War, Escalation, Eruption

3. Deliberate War, Premeditated War
   Preventive War, War by Calculation, Calculated Win, Pre-emptive War
   (Calculating, Controlled or Controlled Response War)

4. Attack-Threatening Strategies, Type II Deterrence,
      Graduated Deterrence, Deterrence by Reprisal, Symbolic Attacks
   Impose Fear of Inadvertent Eruption
   War-Threatening Strategies

5. Escalation, Escalation Ladder, Escalation Dominance, Eruption
   Show of Force, Demonstration of Force, and Demonstration Attack,
      Exemplary and Reprisal Attacks
   Controlled Reciprocal Reprisal, War of Resolution

6. Deterrence, Types I, II, III; Types A, B, C, D
   Active and Passive Deterrence
   Deterrence Only, Minimum Deterrence, Finite Deterrence, Pure
      Massive Retaliation, etc.

7. Improved War Outcome, Damage Limiting, War Capable, War Controlling
      Forces
   Counterforce, Counterforce Targeting, Counterforce Strategy,
      Counterattack, (Strategic) Military Attack, No First
      Strike at Cities Strategies
   Countervalue, (Strategic) Civilian, Retaliation, (Civilian)
      Devastation Attacks
   Insurance, Deterrence Plus Insurance, Extended Insurance

8. Stability, Stability to External Forces, First Strike Only Forces
   Parity
   Stable Deterrence, Multi-Stable Deterrence (Multiple Balanced
      Deterrence), Nuclear Stalemate
   No First Strike, No First Use

9. Local War, Localized War, Non-Central War, Limited War
    Central Confrontations

10. General War, Central War, All-Out War, Spasm War
    Limited General War, Controlled War, Calculating War, Controlled
        Counterforce War, Controlled Response, Bargaining War,
        Damage Limiting War
    Controlled Reciprocal Reprisal War, (Symbolic Attacks)

Almost all of these terms are discussed or mentioned in the text,
but we believe that it will be useful to repeat the discussions from a
new viewpoint. However, there will necessarily be some repetition in
this appendix of points already made in the text.

1. <u>Some important distinctions made with special significance in the
    national security area: deterrence vs. denial, warning vs. threat,
    force vs. violence, spasm war vs. controlled war, ostensible vs. real
    crisis, barely workable vs. almost absolute deterrence, contingency
    design vs. simple advocacy, escalation (theory) vs. limited or general
    war</u>.

<u>Deterrence vs. Denial</u>: A now customary distinction is that between
deterrence and denial, though sometimes it is phrased as deterrence vs.
defense. Deterrence prevents an enemy from doing something by making him
fear the consequences that will follow. The prevention is, therefore, in
a sense, psychological, though it may be based upon very physical consid-
erations. Denial involves putting a "physical" barrier in the way. Of
course, if a physical barrier exists, the other side may be deterred from
action because the gains will be small (they will be zero if the barrier
works perfectly), while the losses may be large relative to the small
gains. Thus, a denial policy or capability may contribute to a deterrence
policy or capability, and vice versa (since the deterrence policy may re-
sult in the other side not using capabilities which could overwhelm the
denial capability). In spite of the interrelation, the distinction is a
real one and is widely recognized, even though it is sometimes neglected
or confused.

<u>Warning vs. Threat</u>: We have used this distinction in two ways. In
the first, which is drawn from Schelling, a warning involves calling the
opponent's attention to the fact that one will react in a way which the
opponent will not like, simply because on a cost-effectiveness or gain-
loss calculation, one's reaction will be reasonable and justified; a
threat is a commitment to do something which would be irrational to carry
out if the threat or commitment had not been made. We have also used
warning vs. threat in a similar sense (see note on page 283) but one which,
while conceptually more complicated, can be more easily applied to many
practical cases. Warning here is used as a general drawing of attention
to the fact that the aggrieved party will not stand idly by if he is pro-
voked, and a threat is a specific statement as to what the counter-reaction
will be (whether or not the counter-reaction includes a rationality-of-
irrationality commitment). Since both distinctions seem to be useful and,
in practice, the two applications are quite similar, we have used both at
the risk of some confusion.

Force vs. Violence: Again a distinction due to Schelling. Force
is the use of physical compulsion in a way which directly carries out or
furthers the end to be desired. Violence is the use of pain for punish-
ment, coercion, bargaining or signalling purposes. The pain that is
caused or threatened may have little or no direct relationship to the
objectives in view, but may depend on "psychological" reactions rather
than direct effects to achieve its ends.

Spasm War vs. Controlled War: This distinction is, of course, one
of degree, rather than of kind. Spasm war presumes a pre-set plan in
which, once the buttons are pressed, no changes can be made. Usually it
involves the launching of every available weapon at the enemy. Control
implies that information is constantly being received and evaluated, and
that the war is waged through a series of conscious decisions with a com-
petence to react to changes. (See Category 10, pages 376 to 377.)

Ostensible vs. Real Crises: An important distinction because so
often people use the language of crises when they do not actually mean
it. As indicated by the escalation ladder metaphor on page 22, there has
to be more than vituperation or some threats before one crosses the "Don't
Rock the Boat" threshold. The real crises since World War II have almost
all been restricted to the relatively low region of traditional crises,
and because we have not experienced anything like the full range of pos-
sible crises, there are systematic tendencies to overestimate the inten-
sity of the crises that are experienced. Paradoxically because most
people recognize--at least unconsciously--that there is a large gap be-
tween traditional crisis rungs and the upper rungs of the ladder, they
may have a false sense of security--their imagination being insufficient
to see how the middle rungs might bridge that gap.

Barely Workable vs. Almost Absolute Deterrence: This distinction is
the end point of a set of distinctions explicated in Chapter VI, (pages
129-132) where it was pointed out that at least five levels of deterrence,
and perhaps more, must be distinguished. A great deal of confusion is
caused in discussions of deterrence by people who do not make, or under-
stand, the fact that a deterrent system is not a simple go-no-go device.
Very primitive (i.e., MD) systems may work, but even the highest quality
EI may fail. See also discussions on credibility, pp. 284-287 and 377-379.

Contingency Design vs. Simple Advocacy: This distinction refers to
the kinds of considerations raised in Chapter IV (pages 66-68) in the
discussion of "Clarify Current Choices." It is concerned with the design
of alternatives with enough hedging and flexibility included to prevent
one from finding oneself with a simplistic choice between unacceptable
alternatives. For example, each of the five basic ACWS's (MFD, ACD, DI,
EI, and NCF) is complicated and sophisticated enough so that it is prob-
ably not possible to make any extraordinarily persuasive arguments against
them. This not true of such simplistic ACWS's as MD, FD, CH, PMR, etc.
(For those who are reading the appendix before the report, ACWS stands
for Alternative Central War Strategies. For a discussion of the various
ACWS's, see Chapter II.)

Escalation (Theory) vs. Limited and General War: The usual dichotomy between limited war and general war tends to be very misleading since there is in fact a spectrum of violence, as indicated by the escalation ladder, and each level of violence has a place in that spectrum. Particularly worth noting is that while limited war is often stated to be more like cold war than general war, general war is also more like cold than general war--at least more so than the image of general war commonly held (and assumed in the comparison with limited war).

The point is that once the possibility of mutual suicide, or any probability of Pyrrhic victory, has been introduced into the system, then it is all important for even the victor to show enough restraint and diplomatic skill to prevent the loser from being driven to irrational or suicidally defiant measures. Thus the reason for the term escalation. It focuses attention on the fact that each side can almost always "increase the stakes" and that bargaining is almost always crucial: that deterrence continues to function during and after an attack as well as preattack, and is likely to continue to be as important as denial in preserving a country.

2. Accidental War, Unintended War, Inadvertent War, Unpremeditated War.
    (War by Miscalculation).
    Catalytic War, Escalation, Eruption.

In some ways this group of terms is of the utmost relevance to the 1965-1975 strategic debate since many believe that this category contains the most likely possible causes of war, and thus is the category of problems most important to deal with. We have already indicated in our discussion of accidental, inadvertent, unintended or unpremeditated escalations (pages 289-291), that the last three terms are synonyms with slightly different connotations. The first term denotes a special kind of inadvertent, unintended, or unpremeditated war. Almost all of the discussion on pages 289-291 is relevant here if the word "escalation" is replaced with "eruption."

The category "inadvertent" or "unintended" includes all wars which start without explicit decisions by responsible decision-makers of the participating nations. It also, however, includes wars in which the causal chain of events includes some explicit responsible decisions provided that the incident which triggers the events immediately leading to war is accidental or contains a very large accidental element.

The term "Accidental War" has often been used to mean essentially the same thing as inadvertent or unintended war. However it can be used-- as we generally do--in a narrower sense, to refer to a particular class of inadvertent wars, those that start as the result of an accident, or accidentally, i.e., as the result of misunderstanding, equipment failure, act of God, and so on. The term would not include any war started as a result of a mistaken belief by the attacker that it could achieve more of a success than was in fact possible--this would be called War by Miscalculation as discussed below.

Note that there is an inherent causation problem in the concept of Accidental War. Since Accidental War focuses on a "triggering" incident, it raises the question of how important the role of the "trigger" must be in relationship to other factors causing the war. It is clear that the same triggering incident could cause a war in one situation and not in another situation. The problem is to decide when one wishes to emphasize the triggering incident, and when to emphasize the situation within which it is sufficient to cause war.

All Accidental Wars are inadvertent and unintended, but not vice versa. The larger class also includes Catalytic Wars--wars started as a result of the actions of a third country which is not one of the primary participants.

Thus a war can also be called inadvertent, unintended, or unpremeditated, if it results from an escalation process, in which each side keeps escalating over the other until an eruption takes place (escalation to Central War) that was not itself "intended." In general the category also includes any war that is caused by a chain of "self-fulfilling prophecies" so long as the chain does not include an explicit decision to go to war made at a time when the war could still have been averted. (A self-fulfilling prophecy could occur as follows: One side's temporizing action is observed by the other side, misinterpreted as being aggressive rather than defensive, thus causing the other side also to make some temporizing defensive move. This second defensive move could in turn be misread by the side originally alerted as confirming his suspicions, so he may make some further moves. Under some conditions it is possible for reactions and signals to be set into motion which trigger off further reactions and signals by both sides until a point of no return is reached, all without either side's making an explicit decision to go to war.)

A borderline case between this category and that of deliberate war would be a war which occurred as a result of reciprocal fear of surprise attack. This is an example of self-fulfilling prophecy possible if there were an intense crisis and both sides had vulnerable forces. Each side might then fear that the other side was going to strike mainly because it knew that the other side was afraid of the first side's strike. Thus each side might become convinced that it should attack--not because it wanted to, but only because it believed that the other side might attack simply to pre-empt a supposed attack by the first (which is itself being launched as a pre-emptive attack). A similar situation, but clearly one which would not be in the unintended category, would be war as a result of Reciprocal Fear of Preventive War. In this situation one or both sides plan an early strike because they believe that in the long run the other side will strike. While each side wishes to get in the first blow, the situation is not tense enough for either to feel that its plans must mature within minutes. Both sides feel they have months or years, but sooner or later the process matures.

3.   Deliberate War, Premeditated War.
     Preventive War, War by Calculation, Calculated Win, Pre-emptive War.
     (Calculating Controlled or Controlled Response War).

        The first two terms are, of course, antonyms of unintended and inad-
vertent. In most cases the word "war" by itself means "deliberate war,"
but sometimes it is useful to make the issue explicit.

        A Preventive War is a special kind of deliberate, premeditated war.
It is started because the nation feels that war is in a particular situ-
ation the least undesirable alternative available. It is a war for pru-
dential reasons: the decision-makers believe they are preventing a
greater disaster later. It is normally considered that this greater
disaster is a war at a less opportune time or in some other way more dis-
astrous than immediate war. It is conceivable that there could be a just,
or justifiable, Preventive War; but Preventive War also includes wars
without moral justification. It can result from decision-makers' judging
that the probability of a worse war or other disaster is high enough for
them to take their chances with an immediate war, timed to their own choice.

        A Pre-emptive War is also a deliberate war, even though the decision
to go to war may be made in a rush. It denotes an attack made because of
a belief that the other side has determined to make an attack on the pre-
empting party and that such an attack is either imminent (probably less
than 24 hours away) or actually under way. In this case the war is basi-
cally the result of the opponent's war preparations.

        The word "pre-emptive" should be reserved for attacks which are made
because it is believed--correctly or not--that there are advantages in
striking first.

        There are at least four possible rational motives for pre-emption.[1]

        First: Because the pre-empting force will be destroyed or dispro-
portionately reduced if it waits for the attack.

        Second: To blunt or prevent an attack. This might be done, even
when a count of weapons indicated that it was disadvantageous to attack,
as long as the pre-emptor hoped that unexpected weapons effects or other
results of the attack might make the blow more effective than ordinary
calculations indicated.

        Third: For subsequent bargaining or tactical advantage. The side
which strikes first is likely to have more and better information about the
status of both sides than the one which goes second. By his tactics the

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        [1] It is also possible that future decision-makers, familiar with the
vulnerability problems of the fifties and early sixties, and not realizing
the full implications of the newly procured "invulnerable" forces, will
be tempted to pre-empt for the first two reasons even when they no longer
hold.

attacker may determine or strongly affect the subsequent course of the war. He makes the first "proposal" about which weapons or capabilities to use. For example, he chooses which of his forces to use in his first strike and which to withhold. He also chooses how to allocate his first strike among the various targets of the defender. Finally the attacker has a psychological and timing initiative which he might be able to exploit in the subsequent bargaining or tactical campaign.

Fourth: To reduce the collateral damage to his civilians by conducting most of the war on the other side's territory. (This last motive might lead to pre-emption even when, from the narrow military point of view, it would be disadvantageous.)

"War by Calculation" is a phrase which expresses the thought that decision-makers, after due analysis, may correctly conclude that it is advantageous--for either offensive or defensive reasons--for a nation to go to war. Common belief, of course, holds the opposite: that deliberate war could arise only as a result of miscalculation. It is possible for decision-makers to miscalculate, but it is also possible that they may calculate correctly and that events will more or less turn out to be as their calculations indicate.

The three terms, Calculating, Controlled, or Controlled Response do not belong in this group. They are included to emphasize this. These terms as explained below, refer to wars in which at each step and turning point the decision-makers analyze what is the national interest, and then try to implement tactics and strategy which will advance this national interest. Such wars are to be contrasted with an emotional or uncontrolled war, or with the carrying through of a Committal Strategy (as explained below).

4. Attack-Threatening Strategies, Type II Deterrence,
      Graduated Deterrence, Deterrence by Reprisal, Symbolic Attacks.
   Impose Fear of Inadvertent Eruption.
   War Threatening Strategies.

Attack-threatening strategies use explicit or implicit threats of a first strike or exemplary attack to achieve major foreign policy goals, such as the protection by the U.S. of Western Europe from massive Russian attack. There are three kinds of attack-threatening strategies:

A. Threat of a disarming first strike. Such strategies would probably need to have large or very large War Capable forces, and might or might not have First Strike Only forces as part of the posture.

B. Threat of Exemplary Attack (a version of Graduated Deterrence). This strategy principally requires a secure Type I Deterrent to discourage deliberate eruption by the defender.

C. Threat of a resolute or uncalculating first strike of any size.

Obviously, even a country with only one weapon can threaten to make a first strike (and if it is a country with a record of erratic behavior such a threat is not entirely incredible). So, in a sense, there are no posture requirements for a strategy which threatens an uncalculating first strike. The possibility that the attack may be made on committal or reso- lution regardless of calculations can be enough to make the threat effect- ive. The common form of this strategy is what used to be called "Massive Retaliation," and would normally be expected to involve large or very large forces, but the forces need not be War Capable and could include major First Strike Only forces.

Attack Threatening Strategies thus use tactics designed to achieve Type II Deterrence and Graduated Deterrence. Type II Deterrence, of course, involves the threat of a large attack in response to an extreme provocation, while Graduated Deterrence involves threat of a high level Symbolic Attack (Reprisal or Exemplary) in response to some provocation, but one which is not expected to lead to war. The Symbolic Attacks also include low levels of force (Show of Force or Demonstration Attack).

The category "War Threatening" might be understood in two ways. One way would be mutually exclusive with "Attack Threatening Strategies" and would thus include only strategies which threatened war in some other way than by threatening attack (generally by manipulating the apparent risk of Inadvertent War or by threatening to do so). This would usually be done by escalatory moves. The second interpretation of the strategy would make "War Threatening" and "Attack Threatening" overlapping categories. The War Threatening category would include all strategies which use any kind of threat to make war more probable. We will use this second defi- nition and thus include Type II Deterrence in the term.

5. <u>Escalation, Escalation Ladder, Escalation Dominance, Eruption.</u>
   <u>Show of Force, Demonstration of Force, and Demonstration Attack,</u>
         <u>Exemplary and Reprisal Attacks.</u>
   <u>Controlled Reciprocal Reprisal, War of Resolution.</u>

We have discussed escalation at some length in Chapter XI, but the concept is so important that perhaps a few more comments could not be inappropriate. In a typical escalation situation there is some form of limited conflict between two sides; either side could win the particular conflict by intensifying the conflict or increasing its efforts in some other way, provided that the other side did not match the increase. Fur- thermore, in many situations it will be clear that if this increase were not matched and victory were thus achieved, the cost of the increased effort would be low in relation to the benefits of victory. Thus esca- lation is generally deterred by the fear that the other side may react, indeed over-react, rather than by the undesirability or cost of the esca- lation itself. That is, in an escalation situation, there is likely to be some "competition in risk taking"[2] or at least resolve. In some esca- lation situations, it is possible to make escalatory moves as a War

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[2]T. C. Schelling's phrase.

Threatening tactic. These moves might not by themselves bring victory, even if the other side did not counter-escalate, but they may bring victory or acceptable compromise by increasing the opponent's fear of eruption. In this last case the confrontation may be reduced to a pure, stark "competition in risk-taking."

In talking about the escalation process, it is convenient to use as a metaphor some physical analogue such as "escalation ladder," without trying to make a rigorous analogy. A typical escalation ladder was given on pages 22-23. This ladder was drawn up by the editor and,while we will not discuss it here (a lengthy consideration of it can be found elsewhere--see note on page 21), we would like to draw the reader's attention to the difference between this ladder and two drawn up by a Soviet specialist (Edmund Stillman--see pages 154 and 159). The justification for using such models of escalation is, in part, that the structure being displayed has important and useful implications, but mainly that it enables us to use such metaphors as Regions of the Escalation Ladder, Steps up the Ladder, Rungs of the Ladder, etc. [3]

An important concept in discussing the tactics of escalation is the notion of Escalation Dominance. This is a capacity such as, other things being equal, to enable the side possessing it to enjoy marked advantages in a given region of the escalation ladder. Escalation Dominance is therefore a function of where one is on an escalation ladder. Escalation Dominance depends on the net effect of the competing capabilities on the rung being occupied, the estimate by each side of what would happen if the confrontation moved to other rungs, and the means each side has to shift the confrontation to these other rungs. One variable affecting Escalation Dominance is each side's relative fear of eruption. That side which fears eruption the least, or has least to lose by eruption, will automatically have an element of Escalation Dominance.

Some of the tactics of Central War Forces used to contribute to an escalation confrontation are: Spectacular Show of Force, Demonstration Attacks, Exemplary Attacks, Reciprocal Reprisals, and so on, as discussed in Chapter VIII. The reader will note that these tactics range from rung 18 to rung 31 of the (U.S.) ladder. In other words, though technically on the middle rungs of the ladder (see page 304) they are, relative to "normal" crises, very high on the ladder: they are used in what can be called a "drive toward a showdown."

As will be discussed later, a War of Resolution--the naked matching of resolve with resolve in an exchange of exemplary attacks and reprisals--is a very important concept in analyzing Controlled Wars, since even Controlled Counterforce Wars can develop into Wars of Resolution while still remaining controlled. In fact, one basic and important way of viewing the counterforce phase of a war is as an attempt by each side to put itself in a better position to fight a War of Resolution.

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[3]See discussion in Chapter XI on Escalation, Controlled War, and War Termination (pages 302-314) for an illustration of the use of the escalation ladder metaphor.

6. Deterrence, Types I, II, III; Types A, B, C, D.
   Active and Passive Deterrence.
   Deterrence Only, Minimum Deterrence, Finite Deterrence, Pure
        Massive Retaliation, etc.

We can think of Deterrence as being the motivation to refrain from
an action because of a threat (explicit or implicit); or a situation in
which one party is prevented or discouraged from doing something by a
threat or warning.

The term is also used to cover any situation in which a person re-
frains from doing something because of fear of consequences, whether or
not the consequences have deliberately been contrived so as to constitute
a threat (thus one may say, "I am deterred from investing in Glamour Gold
Mines because I believe that in the future its stock will sell for less
than its current price," or even, "I am deterred from escalation for fear
that our public will not stand for it."). But most postwar use of the term
in discussions of strategy has focused on the narrower use which is the
primary definition above. There is a good deal of analysis based on this
narrower usage which applies awkwardly or not at all to some of the situ-
ations covered by a broader definition, but in theory both usages are
acceptable. However, we generally stay with the narrower usage.

The classification of Deterrence into Types I, II, and III actually
classifies all deterrence situations into six categories, as indicated
by the chart on page 227.

The usefulness of the classification is that it focuses attention on
two major issues, emphasizes the difference between deterring attacks
directed at the United States or its major forces and deterring extreme
provocations, such as a nuclear or even conventional attack on Europe.
The Type II-Type III distinction indicates the inappropriateness of
threatening massive attacks to deter relatively minor or moderate provo-
cations. A different classification has been suggested by D. G. Brennan[4]
(see next page). His A and D are similar to I and III, while his B refers
to the deterrence of extreme nuclear provocations by threat of large at-
tack. Finally Type C Deterrence refers to the deterrence of extreme non-
nuclear provocations by threat of large but nonnuclear attack. The moti-
vation for Brennan's breakdown is his belief that provocations which do
not use nuclear weapons are, at least for arms control purposes, very
different from provocations which do--no matter how extreme the nonnuclear
provocations are; he wishes to focus attention on the importance of such
things as a No First Use agreement. It thus is convenient for him to have
a terminology which distinguishes easily between extreme nonnuclear provo-
cations and extreme nuclear provocations.

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[4] In Arms Control, Disarmament and National Security (New York:
George Brazillier, 1961), p. 25.

TABLE 1.   BRENNAN'S DETERRENCE DIAGRAM

S.U. ACT U.S. RESPONSE	STRIKE ON U.S.	NUCLEAR PROVOCATION	EXTREME PROVOCATION	OTHER PROVOCATION
STRIKE ON S.U.	A	B_1	--	--
LOCAL NUCLEAR WAR	--	B_2	--	--
LESSER VIOLENCE OR THREATS	--	--	C	D

Graduated Deterrence has some tendency to overlap with both the unnamed and Type III portions of the Deterrence diagram on page 227. Much of this report, in spite of its title, is focused on the concept that Type III Deterrence, Graduated Deterrence, and other "escalatory" concepts will become more important in strategic thinking.

A distinction is sometimes made between Active and Passive Deterrence. Active Deterrence involves a threat which, to be carried out, requires an act of will, a conscious decision. Passive Deterrence is so arranged that if provocation occurs, the carrying through of the threat is more or less automatic or involuntary.

Type I Deterrence is often thought of as passive. It is assumed that if the United States or its major forces were struck there would be no question about the decision to strike back with the surviving forces. Similarly, Type II Deterrence is often thought of as active--if, for example, the Soviets attacked Europe with conventional forces and overran allied conventional forces, it would require a conscious decision (and a very difficult one) for the United States to live up to the NATO obligation as it is normally understood and attack the Soviet Union with strategic forces.

These correlations should be thought of as propositions rather than as definitions. Indeed, one notes that neither proposition is true for all interesting cases. One can write many plausible scenarios in which the United States is deterred from striking back at the Soviet Union with

a large strike, even though it has received a major attack. One can also write plausible scenarios in which a Soviet conventional attack on Europe inadvertently erupts into All-Out War through a U.S. attack on the Soviet Union without such attack really being deliberate or premeditated. If such scenarios describe what are, under some circumstances, plausible possibilities, then it is better not to think of Type II Deterrence as Active and Type I as Passive, but rather to ask to what extent Type II Deterrence is active, and to what extent Type I Deterrence is passive.

"Deterrence Only" Forces are designed on the assumption that deterrence can be made certain enough so that it is not necessary (worth the cost) to plan for deterrence failing. One's forces and plans are only those needed to carry through the Deterrence threat effectively. Sometimes Deterrence Only advocates argue that the making of plans for situations in which deterrence failed would show a lack of confidence in deterrence and have a subtle effect which would make deterrence in fact more likely to fail.

Deterrence Only is the opposite of War Capable as described below. Thus, Deterrence Only Forces are forces which are not designed to fight effectively by reasonable and rational postattack criteria if war comes.

The following kinds of strategies would be Deterrence Only strategies:

a. Finite Deterrence strategies,

b. Attack Threatening strategies which use the threat of a resolute or uncalculating First Strike and make no provisions for limiting the consequences of the opponent's response,

c. Some Other War Threatening strategies (that is, War Threatening strategies can be, but need not be, Deterrence Only).

Of course, since the ability to retaliate or attack can, in fact, always be converted into an ability to fight at some rate of efficiency, however low--a pure Deterrence Only force can never exist. However the phrase Deterrence Only is reasonably accurate in some cases--particularly when applied to intentions, or to the concerns of those designing the force.

7. Improved War Outcome, Damage Limiting, War Capable,
       War Controlling Forces.
    Counterforce, Counterforce Targeting, Counterforce Strategy,
       Counterattack, (Strategic) Military Attack, No First
       Strike at Cities Strategies.
    Countervalue, (Strategic) Civilian, Retaliation, (Civilian)
       Devastation Attacks.
    Insurance, Deterrence Plus Insurance, Extended Insurance.

Improved War Outcome denotes the strategic aim of limiting war damage to the population and resources of the United States and its allies, and

of improving, so far as possible, the military-political outcome of a
war.   Forces which can contribute to this are Damage Limiting, War
Capable or War Controlling. Because such forces have some degree of
flexibility, the decision-makers would presumably have the option of
using the offensive part of the force in either a Counterforce (Military)
Attack or Countervalue (Civilian) Attack, or in some mixture of the two.
Typically, the side which strikes first and which expects to win would
wish to limit, as much as possible, the risk of damage from the defender's
retaliation. It would, therefore, prefer to keep the war to a pure mili-
tary attack and counterattack and would be likely to start with Counter-
force Targeting and hope that the defender will respond with the same kind
of targeting. In such a case, the attacker and defender would be follow-
ing a No First Strike at Cities policy. The defender could, of course,
also respond with an attack against cities, a Retaliation Attack (also
called Countervalue, Civilian or Devastation Attack).

We will normally use "Retaliation" to refer to a large countervalue
attack in response to an extreme provocation (including a large initial
attack). It has been suggested that the term be further restricted to
exclude any first strikes--it would then be defined as a large counter-
value attack in response to any kind of major attack on the U.S. The
definition we will use has the advantage of agreeing with some current
usage; it has the disadvantage of allowing continued slurring of the dif-
ference between responding to an attack on the U.S. and an extreme provo-
cation (the difference between Type I and II Deterrence). Thus a Retali-
ation Attack is thought of as large; or, if it is small, it is neverthe-
less close to a maximum effort (most of the force may have been disarmed
in an attacker's first strike, or it may be that the nation did not have
many weapons to begin with). It is launched out of motives of revenge,
punishment, or in fulfillment of a committal policy.

While all Retaliation Attacks are Civilian Attacks, not all Civilian
Attacks are Retaliation Attacks. The category of "Civilian or Counter-
value Attacks" also includes aggressive attacks and attacks with instru-
mental motivations as described in Chapter VIII.

A "Counterforce Strategy" is a strategy which aims, among other
things, at Improved War Outcome, but emphasizes Counterforce Targeting
as a method of getting Improved War Outcome (i.e., offense is the best
defense). It may, of course, be that Active and Passive Defense are as
important, or even more important, than Counterforce Targeting in getting
Improved War Outcome: the term Counterforce Strategy tends to prejudge
some important issues. Historically, of course, the term and the philos-
ophy are often associated with the Air Force interest in destroying an
enemy on the ground. Partly as a result of this association, the term
Counterforce strategy also has another connotation: that of a particular
kind of counterforce strategy which argues that enough weapons should be
available to target every military installation in the Soviet Union,
either in a First or Second Strike.

Improved War Outcome or Damage Limiting can be pursued for its own
sake and without seeking collateral benefits in the areas of foreign policy
or deterrence. We call this the "insurance" purpose, and have made
the point that its basic assumption was that, despite all efforts, war
could occur, and that if war occurred it is better to survive it than
not, and further, that it is better to win than to stalemate, and better
to stalemate than to lose, and that best of all is to have the least num-
ber of people killed and the smallest amount of property destroyed. That
strategy which emphasizes Improved War Outcome as a major purpose in its
own right and which rejects all War Threatening purposes is called Deter-
rence plus Insurance. If we add to this strategy two further elements,
Preventive War Potential and a greater capability for providing assurance,
we have the Expanded Insurance strategy.

8. <u>Stability, Stability to External Forces, First Strike Only Forces</u>.
   <u>Parity</u>.
   <u>Stable Deterrence, Multi-Stable Deterrence (Multiple Balanced</u>
       <u>Deterrence), Nuclear Stalemate</u>.
   <u>No First Strike, No First Use</u>.

The notion of stability refers to the manner in which a person,
system, or piece of equipment responds to surprise, stress, strain or
shock. For our purposes, a strategic system is stable when stresses or
shocks do not tend to produce large and irreversible changes. This does
not mean that the system does not react when subjected to stress or shock.
For example, a crisis may change strategic forces enormously by putting
them in a state of alert. Stability means that the reactions are of a
limited (and perhaps predictable) nature, and that they are reversible--
or lead to a new balance not essentially different from the original.
One necessary, but not sufficient, condition for Stability is that neither
side be under overwhelming pressure to attack because of military require-
ments based on the nature or deployment of his own or the enemy's forces--
i.e., that no party be under pressure to act because of the advantage of
pre-emption.

Thus Stability is partly, but only partly, measured by the degree
of advantage that any side may obtain by acting first, relative to his
situation if he is attacked. We have already discussed the classic un-
stable situation, "reciprocal fear of surprise attack," where each side,
if it were attacked, would be so very much worse off than if it struck
first, that there is a motivation on each side to pre-empt because of
fear of the known pressure to pre-emption of the other side as well as
out of knowledge of the other side's fear of its own pressure for pre-
emption. Stability would be increased if one side became indifferent,
in terms of military considerations, as to whether it struck first or
second. Stability would be further enhanced if both sides became indif-
ferent. Stability would become greater still if the difference between
First and Second Strike remained the same but the absolute level of the
balance of terror were raised. (Although this seems true of stability
against pre-emption or first strike, as will be discussed below, stability

against other threats may decrease as the level of deterrence increases. Compare, for example, two situations in which 50% of the casualties to be expected if the enemy strikes first would probably be prevented by pre-emption. There probably would be more stability against pre-emption if the expected number of casualties from a first strike were 50,000,000 rather than 1,000,000.) Even greater Stability would exist if all parties would get large military advantages from striking second as compared with striking first. This would obtain theoretically if there were two parties with roughly equal numbers of weapons, and more than one weapon were required to destroy a weapon.

The above condition of little or no First Strike advantage is desirable for Stability, but neither sufficient nor necessary. It is not sufficient because there can be instability with no First Strike advantages. For example, there can be a situation in which one side has 1,000 missiles and the other side has no strategic forces. Both sides would be militarily indifferent to which struck first. Yet the side with the 1,000 missiles could, from the military point of view, afford to be aggressive. Unless the unarmed side completely submitted, the situation would obviously be unstable if the superior side had aggressive policies and vice versa-- there would be greatly increased stability if the superior side were a devoted defender of the status quo. The degree of Stability against pre-emption and surprise attack is measured mostly by the advantage that a side may obtain by striking first relative to a situation in which it is attacked, by the absolute level of the Type I Deterrence of both sides, and by political considerations. Many discussions of Stability in the literature tend to overemphasize the technical destabilizing effect of having some First Strike Only forces[5] or of asymmetry. Today, for example,

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[5]First Strike Only, of course, describes forces which are vulnerable to enemy attack, and which therefore are not likely to be available after an enemy first strike. First Strike Only can also be used to describe tactics or systems which are only justified on a basis of their utility for a country which makes or threatens a first strike.

The term First Strike Only is almost necessarily an oversimplification. The following are some of the difficulties of the concept:

a. Even a vulnerable weapon is of some use to the victim of an enemy first strike because at least it draws off some enemy fire.

b. Bombers and perhaps other weapons are more or less First Strike Only depending upon their degree of alertness. An airborne bomber is not First Strike Only. Whether a ground alert bomber is First Strike Only depends on the quality of the warning system and the willingness of its command to put bombers in the air.

c. Some systems which are not thought to be First Strike Only may turn out to be so because of some unexpected weapons effects or weaknesses.

d. It may be important to distinguish between weapons systems whose First Strike Only characteristics are a by-product of some other special purpose. For example, fighter bombers based in Europe for tactical use in connection with land warfare in Europe may be First Strike Only strategic weapons in relation to a possible attack against Russia. An example of weapons which are deliberately First Strike Only may be a special increment to the missile force which deliberately saved money by not being hardened or dispersed. Such a force would provide a very economical way to get sizable increases in first strike ability, but would be truly First Strike Only (See Alpha-1 scenario in Chapter VI).

the United States has many forces which can be thought of as being First
Strike Only, and it has a much larger total force than the Soviet Union,
and yet few are concerned that the Soviets might strike the U.S. even
though a large Force Reduction Attack is possible. This is because, even
though the Soviets might obtain a greater relative advantage if they
struck first, the results of their first strike would still not be good
enough to provide a meaningful advantage, and the possibility of a U.S.
first strike apparently does not seem large enough to frighten them to
pre-empt.

Thus the sources of stability need not be the same on all sides.
There can be stability in a situation in which one side is very much
stronger than the other but is passive for internal reasons. A situation
may also be unstable if two sides have equal strength but one is much
more aggressive than the other.[6]

The term "Parity" is shorthand for "Nuclear Parity" or "Strategic
Parity." Parity exists when neither side has any important strategic
technical advantages or options from its Central War forces. Parity does
not imply Stability, or vice versa. For example, it may be true in a
situation in which Parity exists that there is an advantage to be obtained
by striking first; however, if there is Parity, the degree of advantage
from striking first must be roughly the same for each side.

One of the most important criteria by which Parity is judged is the
size of the retaliatory blow that each side is capable of delivering after
being attacked by the other. Parity does not exist unless the size of
such retaliatory blows is roughly equal--measured, presumably, in a purely
technical fashion by something like percentage of destruction from the
retaliation. Another possible dimension by which to measure Parity is the
effect each side could achieve from its best first strike. We will say
that Parity does not exist if one side could achieve substantially more
military advantage by its best first strike than could the other.

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[6]For example, Churchill made the following comment on the situation
in 1938 in While England Slept:

I should very much regret to see any approximation in mili-
tary strength between Germany and France. Those who speak
of that as though it were right, or even a mere question of
fair dealing, altogether underrate the gravity of the Euro-
pean situation. I would say to those who would like to see
Germany and France on an equal footing in armaments, 'Do you
wish for war?' For my part, I earnestly hope that no such
approximation will take place during my lifetime or that of
my children. This does not in the least imply want of regard
or admiration for the qualities of the German people, but I
am sure that the thesis that they should be placed in an
equal military position to France is one which, if it ever
emerged in practice, would bring us within practical distance
of almost measureless calamity.
Winston Churchill, While England Slept (G. Putnam's Sons, 1938), p. 13.

Because it is defined in terms of narrow military considerations, the concept of Parity does not imply that each nation obtains equal benefits from its strategic forces. That nation which is more reckless, more determined, more willing to accept damage or has greater freedom in making threats, could have important superiority in a Parity situation, both in its foreign policy and in its capability for Escalation Dominance. The situations in which there is both Parity and Stability are referred to as enjoying either Stable Deterrence or Multi-Stable Deterrence.

"Multi-Stable Deterrence"[7] exists when each side is judged by its opponent to have (a) the ability to respond to the enemy's best first strike by delivering retaliation which would in normal times be unacceptable, or (b) the ability to deliver a first strike which would disarm the enemy to such a degree that he is not likely to deliver a retaliatory blow which would be "unacceptable" in extreme or desperate circumstances.

The basic characteristic of a situation in which there is Multi-Stable Deterrence is that both sides have a good deal of Type I Deterrence, but in addition, both sides have an ability to threaten a nuclear attack in order to deter extreme challenges to their existence. That is, where Multi-Stable Deterrence exists, the threat of a calculated nuclear attack will serve to constrain the political conduct of both sides.

While this definition has been framed in terms of the _size_ of possible retaliatory blows, essentially the same situation can be achieved on the basis of the _probability_ of very large retaliation. That is, Multi-Stable Deterrence could exist if each side (a) had a 25% chance of delivering an overwhelming retaliatory blow if it were attacked, and (b) each side had a 25% chance of escaping without overwhelming damage if it made a first strike against the other side. In actual practice, Multi-Stable Deterrence will represent a mixture of the quantitive and the probabalistic factors. Multi-Stable deterrence may be unstable from the point of view of arms race considerations in that it could be relatively sensitive to technological and force changes.

On the other hand, it is important to note that a deterrent situation that is very stable against pre-emption or first strike may, in some sense, actually encourage extreme provocations. A situation in which there is Multi-Stable Deterrence, although it is somewhat less stable to surprise attacks and unintended war, has a larger stability against provocations, that is, provocations do not increase from a lack of central war dangers to deter them.

The concept of Multi-Stable Deterrence implies that it is possible for two opponents to possess, simultaneously, reasonably satisfactory levels of Type I and Type II Deterrence. This seems paradoxical, because to some extent one side's Type I Deterrence is measured by the inadequacy of the other side's Type II Deterrence. A partial resolution of the paradox lies in the fact that nations tend to be conservative and to look

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[7]Also called Multiple Balanced Deterrence.

at the reasonable worst that might happen to them. Thus the calculations
made by both sides are inconsistent because both sides have hedged. To
the extent that nations tend to make optimistic calculations, it is more
difficult to have Multi-Stable Deterrence.

We shall say that a nuclear stalemate (of the Cold War) exists when
the balance of central war forces is such that neither side is capable of
making a disarming first strike. That is, a nuclear stalemate exists when
neither side has a clear theory of how to win a central war.

One of the important things to notice about this use of the term
"nuclear stalemate," which is clearly not the only reasonable way to use
the term, is that even when a nuclear stalemate exists there may be an
important role for nuclear weapons. For example, all of the Symbolic
Attacks and threats of escalation of various sorts which we have already
discussed remain possible. Thus the word Stalemate should not be under-
stood as carrying the connotations it possesses in chess where it means
the _end_ of the game. A Nuclear Stalemate is _not_ an absolute deadlock in
which neither side can move; it is a situation in which neither side is
in a good position to win a nuclear Central War. Nor does Nuclear Stale-
mate necessarily imply Parity or symmetry.

Many strategists and arms controllers believe that Stability would
be greatly enhanced if both sides explicitly adopted a No First Strike or
a No First Use policy, either by agreement or unilaterally. A No First
Use policy is one that renounces the option of being the first to use
nuclear weapons; a No First Strike policy is one which renounces the op-
tion of being the first to make a major strategic attack. (Of course
this simple definition does not deal with the distinctions among various
forms of declaratory policy and of internal decision policy.) A No First
Strike policy is different from a No First _Use_ (of nuclear weapons)
policy in that

   a. A No First Use policy renounces the introduction of tactical
       nuclear weapons into a conventional war--a No First Strike
       policy would not.

   b. If the enemy uses tactical nuclear weapons, a No First Strike
       policy would still preclude a major strategic attack--although
       of course it will not preclude use of tactical nuclear weapons;
       in this situation the No First Use policy would not renounce a
       major strategic attack.

9. _Local War, Localized War, Non-Central War, Limited War,_
    Central Confrontations

All these terms refer to wars which are fought within geographical
limits (there may or may not be other constraints). The limits may be
inclusive or exclusive; that is, the war may be limited to a single area--
such as Korea--or it may be limited only by the exclusion of certain terri-
tory--such as the Soviet Union and the United States. In the latter case
"Non-Central War" seems more appropriate. However, if the U.S. or S.U. are
directly involved (rather than by proxy) we call even a local war a Central
Confrontation.

It is important to understand that the word "local" does not imply
that the war is fought about local issues or that it is not part of a
world-wide conflict. This point is emphasized in the term "Localized
War."

The expression "Limited War" has recently acquired some ambiguities
because of the realization that there are many ways in which wars might
be limited. The use of the term as a synonym of "localized war" wrongly
implies that any wars not within the definition are necessarily unlimited.
On the other hand, the term Limited War has gained wide currency among
laymen, professionals and scholars, and it is difficult to believe that
it will be dropped.

10.   General War, Central War, All-Out War, Spasm War.
      Limited General War, Controlled War, Calculating War, Controlled
            Counterforce War, Controlled Response, Bargaining War,
            Damage Limiting War.
      Controlled Reciprocal Reprisal War, (Symbolic Attacks).

The terms General War and Central War are basically synonymous. The
first emphasizes that all forces and branches of service are engaged; the
second, the fact that strategic attacks upon enemy homelands are probably
going to dominate the outcome, though if the strategic exchange is incon-
clusive, the cease-fire is likely to be influenced by or simply recognize
the ad hoc status quo--which in turn may be dominated by the war fought by
the general-purpose forces.

A General War or a Central War is usually thought of as All-Out War,
and this is not very misleading if the term All-Out is used to refer to
the effort--that is, to the forces that are committed or available to the
enterprise. But the term All-Out sometimes connotates undiscriminating
targeting, and, in this case, can be misleading as a description of all
General or Central Wars. Undiscriminating or Uncontrolled War is only
one special kind of General or Central War.

Large wars which are fought within limitations are generally given
such names as Limited General War or Controlled War. Again the two terms
are synonymous but with different connotations. Limited General War im-
plies some modification of General War; Controlled War has the implication
of even greater modification. As defined in On Thermonuclear War (p. 302),
wars which involve enduring War Capable forces with flexible war plans,
adequate command and control, the use of preattack and postattack coercion
and a discriminating use of force to facilitate postattack blackmail, intra-
war deterrence, and bargaining, are Controlled Wars. Various forms of Con-
trolled Wars are given such names as Controlled Response, Bargaining War,
Controlled Counterforce War, Damage Limiting War, etc.

All of these terms are in sharp contrast to the "Spasm War." This term,
also drawn from On Thermonuclear War, was deliberately coined to discredit a
fairly common picture of thermonuclear war--as inevitably being an orgiastic
spasm of destruction in which all the buttons are pressed and the commanding
officers then go home, their duty done. The term now has acquired the tech-
nical significance of an attack in which there is a maximum effort in the
first strike and little or no concern over later strikes. The objective is

to do as much destruction as possible in the first strike without compromising other considerations. There are circumstances in which this might be a preferred tactic, though normally this tactic is associated with an Uncontrolled War--blind and irrational.

There are two basically different kinds of Controlled War--the Controlled Reciprocal Reprisal Wars (Wars of Resolution) and Controlled Counterforce Wars. A Controlled Reciprocal Reprisal War indicates a series of reciprocal tit-for-tat reprisals carried out in the hope that the other side will weaken first. The Controlled Counterforce War envisages strictly military attacks by each side until one side or the other gives up, or deliberately or inadvertently changes to some sort of Countervalue Attack (possibly a Controlled Reciprocal Reprisal). Controlled Reciprocal Reprisal Wars may, and usually would, be Wars of Resolution--a naked matching of will against will.

Finally, there are Symbolic Attacks. These are hostile, violent, and usually illegal acts, but acts that are not necessarily accompanied by any intention to wage war or create a state of war in the legal sense. Of course, a legal state of war can exist without hostilities if the parties have expressed an intention to deal with one another as belligerents, or even if they act as belligerents without explicit declaration. But if hostile actions are not treated as war by either contestant or by outside parties, then such hostilities do not in themselves create a state of war. In our language, they may constitute Shows of Force, Demonstration Attacks, Exemplary Attacks or Reprisals. Sometimes the dividing line may be difficult to draw. One or two Reprisals is clearly not a Controlled Reciprocal Reprisal War--ten or twenty clearly are.

A Final Note on Vocabulary

Throughout this report, and particularly in the discussion of deterrence variables, terms of probability and of likelihood are used that have a clear meaning but not a quantified one. The use of these terms--not incredible, not unlikely, credible, etc.--conveys nuances of meaning appropriate to the judgments made by decision-makers functioning in a strategic-political milieu. It is also possible, however, to assign to these terms quantified definitions that may lend precision to their use in specialized discussion.

If a number of people were asked to specify quantitatively what they mean when they describe an event as "likely," nearly all would assign it a probability somewhere between 0.51 and about 0.95. Higher probabilities than this are usually considered a virtual certainty, and the word "likely" is not held to be appropriate to them. Similarly, people who are asked to give a quantitative evaluation of "unlikely" will usually exclude the range of events that they consider nearly impossible. "Unlikely" then is felt to be too weak a term. Thus a theoretical range from 0.01 to 0.49 would make sense, although most people would specify a much narrower range, usually towards the lower probabilities.

"As likely as not" means about the same to most people as, say, 0.45 to 0.55 probability. "Not likely" is fraught with difficulties, because some (pedantic?) people tend to interpret it as "not-likely," i.e., rather similar to "unlikely." Logically and by usage, it is to be interpreted as not "likely," i.e., 0 to 0.51 or higher, according to the lower limit of "likely."

"Not unlikely" has similar difficulties, with the additional one that
there is a "rule" about double negatives. It is then quite often under-
stood to mean "likely," while logically it should simply mean Not "un-
likely" and thus the whole range of probabilities from 1 down to whatever
the upper limit of "unlikely" is felt to be. The results are represented
in this table.

QUANTIFICATION OF LIKELIHOOD

	Possible probability range	Usual probability range
Likely	0.51 - 0.99	~0.67 to ~0.95
Unlikely	0.01 - 0.49	~0.05 to ~0.33
As Likely as Not	0.33 - 0.67	~0.45 to ~0.55
Not "Likely"	-	0 to ~0.67
Not "Unlikely"	-	~0.33 to 1
Neither Likely nor Unlikely	-	~0.33 to ~0.67

A similar quantification of "Credibility" runs into new difficulties.
Credibility depends on the situation more than likelihood, because the
basic probability of the situation is affected by the reliability of who-
ever is making the statement or threat which is being considered. For
all but the most unserious, frivolous or irresponsible declarators, the
mere fact of declaration increases the probability (though many tend to
exaggerate the effect of declarations not realizing how sobering the
"moment of truth" can be). In addition, the term "incredible" has a meta-
phorical meaning which is far more extreme than the simple negation of
"credible." Thus, for most people, it actually covers probabilities right
down to zero. Thus one might construct the following table. (Owing to the
greater dependence of credibility on the situation and the nature of the
assertion or threat whose credibility is discussed, we shall confine our-
selves to "agonizing" deterrence situations.)

QUANTIFICATION OF CREDIBILITY IN DETERRENCE SITUATIONS

	Usual probability range
Credible	~0.1 to 1
Incredible	0 to ~0.01
Not "Credible"	0 to ~0.1
Not "Incredible"	~0.01 to 1
Neither Credible nor Incredible	~0.01 to ~0.1

No great weight should be attached to the particular figures given here; but they do make a point. Whoever draws up the list is likely to leave an interval corresponding to "neither credible nor incredible." The importance of this is seen in the discussion of Central War Strategies.

There is no doubt that the accuracy of the probability figures used is out of proportion to the difficulty, fuzziness and indeterminacy due to intangibles that are inherent in such situations. Nevertheless, the quantitative assessment allows a finer appreciation of the meanings of such concepts as "Not Incredible" and of its difference from "Credible" in the discussion of Strategies. This is one way, then, of refining the language for the Debate.

APPENDIX II

A FORMAL PRESENTATION OF FIFTEEN CENTRAL WAR STRATEGIES

On the whole this appendix will, even more than the previous one, repeat material that has already been covered. We will organize this material somewhat systematically by its relevance to any particular ACWS, hopefully in such a way as to facilitate reference and review. For the same reason we will separate the discussion of each strategy into nine areas as follows:

A. Introductory Comments: the major defining characteristics of the strategy and other introductory comments.

B. Sub-Themes: typical themes or special attitudes which characterize important classes of adherents.

C. National Goals: considerations normally discussed at Levels 1-3, particularly important assumptions about--or special emphases on-- particular U.S. or Soviet national goals that the strategy makes.

D. Political-Military Analysis (Level 4): political-military assumptions, tactics, and working objectives.

E. Central War Purposes (Level 5): the major purposes, requirements, and criteria which the central war forces must be capable of meeting.

F. Typical Capabilities (Level 6): postures, systems, and other special equipment or capabilities.

G. Likely Tactics: more Level 6 analysis--includes references to declaratory, contingency or action policies.

H. Level 7 Considerations

I. Other Comments

We will use the numbers of the strategy and the alphabetic letters on the sections for an internal reference in this appendix, i.e., 2C would refer to discussion of national goals in the Finite Deterrence strategy.

The nine divisions are based on, but are not faithful to, the previous categorization by seven levels of analysis. The fifteen strategies (in the same order as on pages 29 and 329) and the pages on which each discussion starts are given on the next page.

THE FIFTEEN STRATEGIES

Before continuing, it might be well to remind the reader of the dis-
cussion on pages 54 to 56 of the five purposes for which an ACWS type
formulation can be used. These purposes are listed below:

1. A useful and accurate <u>description</u> of what the over-all central war
   policy is or is intended to be.

2. A basis for a <u>metaphoric description</u> of some aspect of a central
   war policy.

3. <u>Setting</u> objectives and criteria.

4. <u>Scoring</u> activities or capabilities.

5. <u>Reporting</u> activities or capabilities.

The exact significance of any particular statement may depend on the
application that is being made. We also would like to remind the reader
that there are differences among declaratory, contingency, and action pol-
icies and that these may be only distantly related in practice to images
and intentions (see pages 348 and 349). Finally we are here making a rela-
tively static analysis and are not considering how ACWS's or the dynamic
measure-countermeasure problems might change over time.

1. Minimum Deterrence Only

A. **Introductory Comments**: This strategy concentrates on having only
a small nuclear force designed only to deter an enemy from launching a nu-
clear attack against the homeland of the U.S. It is a "layman's" strategy
in that there is no concern with technical details.

There are many widely divergent rationales based on equally divergent
assumptions which can be used to explain or justify this lack of concern
with details. Because these assumptions frequently appear, perhaps in a
modified form, in assumptions or values leading to other strategies, they
are worth discussing and noting.

B. **Sub-Themes**:

MD-1. **Conserve All Resources (economic, intellectual, etc.)**:
The nation's resources will be best utilized by estab-
lishing only minimum military capabilities. Financial
resources, the thought and the energy of those who steer
the nation, skilled manpower, etc., are a scarce commodity
in, and should be concentrated on, reaching nonmilitary
solutions to the many problems.

MD-2. **The Lesser Evil**: Weaponry and war are not among U.S.
values, but they appear to be a necessary evil. Mini-
mum Deterrence reflects the least noxious form of this
evil.

MD-3. **Arms Race Deceleration**: A larger deterrent force or even
more attention focused on details would only stimulate
the desire for larger forces. If an opponent also re-
sponds to this stimulus, the spiral which would develop
may lead to immense destruction.

MD-4. **Antimilitarism**: The acquisition and control of a large
force of nuclear weapons can have such an impact that the
values of democracy may be distorted or compromised by
their existence. The military aspect of the nation's
foreign and domestic policies would breed a militaristic
government and society. The U.S. as a democratic nation
might deteriorate or cease to exist altogether. If we
have to possess such forces, then we can at least miti-
gate the evil by not putting time, attention, or scarce
resources into them.

MD-5. **Deterrence is Easy and Sufficient**: Deterrence is, after
all, psychological--the probability of thermonuclear war is

extremely low if one **Deterrence Only** strategy in a small nuclear force, owing to the large destruction it might cause, is sufficient to deter.

MD-6.   <u>Thinking is Dangerous</u>: Any thought, calculation or analysis of the requirements of Central War will corrode our morale. It is best to simply commit oneself to some deterrent tactic and then accept this committal as a given-- indeed as a part of nature.

MD-7.   <u>The Least Dangerous Posture</u>: The nature of these new weapons has fundamentally changed the political and military assumptions of warfare and its functions. The aftermath of any nuclear war will find most political relationships so changed that the only goal should be to preserve people and material resources without regard to their political constitution. If war occurs, at least the damage done in the world will be minimized.

MD-8.   <u>A Token Gesture</u>: The political and military significance of nuclear weapons is so nebulous that the U.S. may be faced with the dilemma of suicide or surrender no matter what our posture. We should not give up altogether, but to have larger forces achieves no real purpose either.

MD-9.   <u>Nuclear Incredulity</u>: Nuclear war is unthinkable--it cannot occur. (This assumption is sometimes made, in a less extreme form, by persons who feel that nuclear war could only result from excessive concentration on its theory and weapons, or from maintaining a posture which must give rise to justified fears in the enemy camp.)

     C. <u>National Goals</u>: Assume that Soviet goals are such that a very small probability of any kind of nuclear retaliation is adequate to deter them. There is also an assumption that the Soviets are so conservative that they consider only the worst cases (that even relatively small provocation might touch off a war, or that a surprise attack is very likely to go astray). Other U.S. goals include: making sure that only limited damage will be done by U.S. weapons if war happens to occur inadvertently and elimination of reciprocal fears of surprise attack. There may be a firm belief in the immorality of participating in the arms race or threatening attacks except in reprisal for an attack, but it is also considered fair to treat the opponent's women and children as hostages if we have minimized the probabilities of central war. By divesting ourselves of any war-capable forces we would make war unthinkable and in addition demonstrate our good will in a way that is more likely than alternative policies to bring about reciprocal actions.

     D. <u>Political-Military Analysis</u>: Most proponents of MD wish to conserve scarce resources--intellectual, political, social, and economic; stabilize deterrence by being clearly nonaggressive; present a nonaggressive image both domestically and internationally; have a policy which is

fully compatible with arms control. Some Minimum Deterrence advocates
may also aim at a unilateral slowing down of the arms race--both techno-
logically and quantitatively. (Since most of the motivation for the arms
race is simply based on self-fulfilling prophecies and other such perni-
cious action-reaction mechanisms, any major allocation of scarce resources
to Central War Purposes is considered a serious waste. Unilateral arms
reduction moves by our side are safe for us and will make the world safer.)

Assurance is attained by deliberately ignoring the threat of involve-
ment in a war which we believe we have made unthinkable. The Efficient
Use of National Resources, and Arms Race Deceleration may be thought to
be included within the objectives of this strategy along with the reduc-
tion of reciprocal fear of surprise attack. Political Acceptability at
home and particularly abroad would tend to be high among "pacifists,"
low among "realists." Capability Against Unorthodox Opponents would rest
only on the assumed sufficiency of deterrence.

E. Central War Purposes: On page 53 see 1, 2, 4 and ignore 3 and 5.
The outcome of a war is "improved" anywhere in the world by the limitation
of damage. Type I Deterrence is all that is required.

F. Typical Capabilities: The force may consist typically of 1 to
100 bombers or 1-50 missiles, but even a large force which is vulnerable
could be considered MD if it is poorly organized or unreliable. No sur-
viving command and control is needed except possibly to give a "go ahead"
order; thus there is no ability to hold fire for fear of destruction by
enemy action or even to control responses. There is little or no capa-
bility for selective firing; and finally no passive or active defense.
Somewhat greater flexibility or war capability would not necessarily be
inconsistent with this strategy, however.

Because one is using a small force, some adherents (perhaps MD-1, 4,
5, 6, 8, and 9) would use very large bombs; others would not. Defensive
systems, command-and-control requirements, and tactical and strategic
skills are low, partly because the response is intended to be automatic,
inexorable and apparent--and partly because adherents often do not think
about the problem.

G. Likely Tactics: Threaten retaliation if U.S. were to be struck.
Respond in a single retaliatory spasm with total surviving force if U.S.
is struck.

H. Level Seven Considerations: In times of peace very typical of
historical American attitudes. Posture is very acceptable to uninformed.

I. Other Comments: MD is likely to be a typical Nth country pos-
ture. Some adherents of this strategy combine it, implicitly, with a
tactic of pre-emptive surrender if deterrence fails.

2. Finite Deterrence

A. Introductory Comments: This strategy is very similar to Minimum
Deterrence in its aspirations, but it takes the requirements for Type I
Deterrence seriously. Unlike Minimum Deterrence, this is not a layman's
strategy. There is no question that the limited aims of Finite Deterrence
(i.e., of Minimum Deterrence) must be achieved at all costs and that the
quality of military forces supporting this posture cannot be treated in
a dilettante fashion or entrusted to the yagaries of chance.

B. Sub-Themes: One can discuss FD varieties of "MD-n" and with
minor changes, if any, make the following correlations:

$$MD-1 \longrightarrow FD-1$$
$$MD-2 \longrightarrow FD-2$$
$$MD-3 \longrightarrow FD-3$$

With some modifications and reservations, the attitudes of MD can have
counterparts for the following:

$$MD-4 \longrightarrow FD-4$$
$$MD-5 \longrightarrow FD-5$$
$$MD-6 \longrightarrow FD-6$$

But the following correlations are clearly impossible:

$$MD-8 \longrightarrow FD-8$$
$$MD-9 \longrightarrow FD-9$$

There is a reasonably broad range of views among FD proponents. Some
consider that the threat of moderate retaliation is all that is necessary;
but they believe that it must be unconditional. Any alternative to retali-
ation against value would show lack of resolution and therefore reduce
deterrence. On the other hand, many FD proponents are not single-minded
in the desire to be "locked-into" a second-strike countervalue strategy.
Some might wish to be prepared for a contingency in which a counterforce
second strike would be possible; others might be willing to prepare a force
suitable for limited Type II Deterrence, but would plan a first strike only
for a remote and extraordinary contingency. That is to say, there may be
some vestiges of MFD, LSR, or NMR in this strategy.

C. National Goals: Much as in MD.

D. Political-Military Analysis: Much like MD but with stress on the
need of objective capabilities for both Type I Deterrence and Assurance.
Those objectives which are considered to be of importance, such as Assurance,
Stability, etc., are expected to be achieved by increasing the size of the
forces and their ability (over Minimum Deterrence only) to hold fire for a
somewhat longer time in crises.

Adequate Type I Deterrence requires an inexorable retaliation which would destroy, say, 50 (might be 10-200) major cities. Any acquisition of War-Capable forces will accelerate the arms race or tend to decrease stability since it would make war "thinkable"--both by explicitly preparing for deterrence failing and by taking away from the stark, total defensive nature of the posture. The assumptions are similar to Minimum Deterrence, except that the adherent is willing to do a good job of protecting the force and is willing to make it large enough to assure "adequate" retaliation. (Sometimes the following assumption is added: It is desirable not to have any visible strategic alternative so as not to be vulnerable to coercion.)

E. Central War Purposes: The same as in Minimum Deterrence. There may be some consideration of having an "improved war outcome" by means other than the simple limitation of the extent of the conflict. The use of force or threats might be a part of the contingency plans in FD, but the contingency would be considered to be remote and "hypothetical."

F. Typical Capabilities: With these philosophies in mind, adequate deterrence requires an inexorable retaliation that will destroy a significant number of major cities--the size of the force being so calculated. Except for the special contingencies that may arise, its adequacy will depend only on having protected and reliable retaliatory forces. Pretargeting against countervalue targets and the lack of need for selective targeting requires little by way of command and control, intelligence, etc.

Typical procurement according to a Finite Deterrent calculation might be a small (10 to 100 deliverable weapons) to moderate (100 to 2,000 deliverable weapons) force, all weapons carefully hardened, mobile, or otherwise protected. For the most part, there would be no war time control capability, only pretargeting against countervalue targets with little or no selective firing. One possible modification: if the force is large, a doctrine change in a crisis might permit firing only a portion of the force so that the rest of the force could be withheld in hopes of intimidating later responses by the attacker. A capability to do this might very likely be included if there is serious contingency planning. We would then have an FD declaratory policy and some possibility for an MFD action policy.

G. Likely Tactics: Threaten a countervalue retaliation with surviving weapons if U.S. or major forces were to be struck. Respond thus in fact if U.S. is struck. This tactic should be explicit--and some believe the execution must be reflexive. The unconditional threat is desirable for Type I Deterrence. Any inclusion of a war-fighting capability or control would impair the automaticity, thus correspondingly increasing the chances of war by making it feasible.

H. Level Seven Considerations: Psychologically even more acceptable than MD.

l. <u>Other Comments</u>: As in Minimum Deterrence, some adherents really
believe in the pre-emptive surrender tactic. Others are firm members of
the nuclear incredulity school. Some Nth countries may achieve a FD
capability as most or all other Nth countries achieve MD.

3. Strategy as Currency

A. **Introductory Comments**: This strategy concentrates on satisfying the political pressures which are irrelevant to Central War. Basically, advocates of this strategy would use strategy as a currency with which the nation or party buys an improved political position.

It is difficult to break down this strategy into objectives, assumptions and capabilities because in this strategy the executive office does not worry too much about the objective capability for fighting, surviving and terminating war. Its philosophy is rather similar to that of the minimum deterrent advocates. It believes that war is unlikely, particularly if one has at least a facade indicating an ability to deter and fight such a war. This facade should not be spectacularly phony-looking since for various reasons it is necessary to have a good-looking facade.

B. **Sub-Themes:**

1. Look good to allies--particularly NATO. (Some moves by NATO in the last 10 years have been largely in response to political pressures by the United States and not because the governing council or the European Nations have believed them to be necessary or desirable.)

2. Satisfy various military or civilian pressure groups in the procurement of some equipment.

3. Neutralize criticism from political opposition.

C. **National Goals**: Indefinite (see Political-Military Analysis).

D. **Political-Military Analysis**: The political motivations for the strategy may be both internal and external. Internally they might involve being able to withstand criticisms of one's own government, and even "leaks" by experts. Externally they involve the reactions of the enemy, allies, and neutrals. Many forms of this strategy will be weak in the Escalation Adequacy and Assurance areas.

The government is likely to know about any weaknesses that have developed because of lack of interest in assuring objective capability; if it doesn't know this on its own, experts or critics are likely to inform it. Even if it believes that the facade will deter the opponent it cannot be certain. It will therefore tend to lose both Assurance and Escalation Adequacy. Many objectives would be the same as those of Minimum Deterrence--Efficient Use of National Resources, Arms Race Deceleration and most importantly, Political Acceptability. Assurance would be satisfactory if some of the political requirements were satisfied.

E. **Central War Purposes**: This force would be maintained to offer appearance if Type I, perhaps Type II Deterrence, and some degree of Improved War Outcome. Technical Safety would also be a likely attribute.

The Threat of Inadvertent Eruption would quite possibly be relied upon
to achieve escalation adequacy if the force failed to be sufficiently
deterring in itself.

     F. Typical Capabilities: The force which would be developed under
such a system would have at least some moderate degree of effective capa-
bility since the various demands and criticisms could not be satisfied
otherwise. The operational, tactical and strategic skills might, how-
ever, lack definition and integration. The force may, in fact, be mod-
estly effective, because in order to get a good-looking facade it does
need a certain capability, but the point of this strategy is that it
doesn't aim for this capability for its own sake. A reliably good-looking
appearance is as satisfactory as reality, at least for the strategy. Of
course, if it is very inexpensive to get objective effectiveness, the
advocates may be willing to buy this objective effectiveness. But these
advocates are not willing to make political, financial, or other compromises
or sacrifices in order to get objective effectiveness.

     G. Likely Tactics: Tactics and strategy are even more likely to be
considered uninteresting or abstract subjects than with (see pages 7-9,
195-196) the other strategies and thus will be relegated to the profes-
sionals to do as they wish. Most likely tactics, in a spasm aimed more or
less equally at counterforce and countervalue, depending on details of how
the war starts (but not on its objectives).

     H. Level Seven Considerations: Almost by definition SC tends to be
dominated by political and other considerations (see page 109 for list of
Nth country objectives) at this level as well as Levels One to Four.

     I. Other Comments: The chief value of having this strategy on our
list is to use as a metaphoric description of aspects of U.S., S.U.,
and other nations central war policies, and perhaps as an accurate des-
cription of the whole of some Nth country policies.

4. Mostly Finite Deterrence

A. <u>Introductory Comments</u>: This is the first strategy which we will seriously consider as a possibility for the U.S. It is very similar to Finite Deterrence except that there has been some compromise to make it less stark; the increased flexibility being felt to be desirable even if it involves some costs. While the dominant theme in MFD is still Finite Deterrence, to the extent that this major objective will not be substantially compromised, MFD calls for some degree of Improved War Out Outcome and a capability for graduated deterrence. There is also some concern about being able to fight, survive and win nuclear wars with Nth countries.

B. <u>Sub-Themes</u>: As in FD with the following modification.

Advocates of this strategy prefer it to FD for one or more of the following reasons: Some believe that deterrence can fail and want to hedge against this possibility; some wish to make Finite Deterrence more acceptable politically; some wish to have a preattack mobilization base for getting into one of the "war-fighting" strategies; and some believe the go-no-go tactic of FD is accident prone.

C. <u>National Goals</u>: Proponents are not so concerned with making war "unthinkable" as to be unable to think about strategy and tactics. Otherwise MFD is extremely defensive--at least in the Central War Area.

D. <u>Political-Military Analysis</u>: A modest addition of war-capable offensive and defensive forces to the Finite Deterrence Posture, if used only to protect people and property from collateral and accidental damage, can yield important advantages without seriously jeopardizing the major objectives of Finite Deterrence. If sufficiently modest, these forces will neither accelerate the arms race, nor cause serious instability; the Improved War Outcome capability is too small for that. On the other hand, the starkness of Finite Deterrence makes it unacceptable domestically and unsuitable for many foreign policy purposes. Moreover, the extra flexibility of MFD may also turn out to be helpful in preventing inadvertent all-out war.

This strategy can be advocated by those who give considerable weight to the conservation and maximization of the financial and personnel resources of the U.S., since it is simple and economical when compared to some of the more complex strategies. Unlike the "war-fighting" strategies, MFD cannot readily be used to achieve escalation dominance except possibly when tension reaches a high level. This strategy's intent is to increase Assurance and Stability to External Shocks, by making mutual homicide less likely and by allowing for the possibility of taking time to respond, hoping thus to avoid a major inadvertent war.

Although Alliance Cohesion is a critical problem in MFD, many of the difficulties are not so extreme as in FD because of the added war-fighting

capability in MFD. On the other hand, this strategy has such a weak
war-fighting capability that no change is likely to occur in the pace
of the arms race. In fact, the MFD posture is expressly designed to
lessen the likelihood of acceleration, although some advocates of Mini-
mum or Finite Deterrence might feel that even a small effort to develop
war-fighting capabilities is apt to result in at least some small measure
of arms race acceleration, and that even the smallest measure of acceler-
ation is too great. Nevertheless MFD is compatible with almost all
specific arms control measures. The added flexibility of this posture
would be assumed to advance Capability Against Unorthodox Opponents, but
only against weakly armed opponents. However most people sympathetic to
this posture would feel the probability of the occurrence of a well-armed
Hitler is too low for consideration in an over-all, long-term policy, or
at least that such an opponent could not arise without allowing the lead
time necessary to adapt one's posture. They would thus assume their
strategy to satisfy this objective.

One of the major motivations for this position is that the starkness
of the threat of (perhaps mutual) annihilation is to some degree polit-
ically unacceptable. The change to MFD is intended to make deterrence
more palatable, and more workable, since the need for retaliating all-
out, and thus provoking a return in kind, has been lessened.

Although proponents of MFD believe that this strategy represents a
sound compromise between deterrence and war-fighting capabilities, it is
open to attack by those who take more extreme positions. Indeed, there
is a chance that several of the objectives that it aims to achieve (e.g.,
Arms Control, Escalation Adequacy, Political Acceptability) may be missed
by not going far enough. At the same time the failure of deterrence,
that is being hedged against, may indeed take place because of the com-
promises. In some versions of this strategy, the compromises may be in-
deed only token gestures to erect a facade (i.e., there is a component
of Strategy as Currency) to allay the fears of those who would otherwise
be alarmed by the harsh simplicity of Finite Deterrence only.

E. Central War Purposes:

1. Type I Deterrence: Included.

2. Improved War Outcome: As mentioned earlied, most proponents
of deterrence-only strategies arrive at their choice by way of faith in
deterrence or in nuclear incredulity; they believe that the outcome of
a major nuclear war is not a variable that can be controlled. The thinking
and efforts behind this strategy, on the other hand, are directed to im-
proving the national position should a Central War occur. Since the war-
fighting capability will not be so great as to interfere seriously with
arms control measures, modest enemy efforts to negate the improved war
outcome are likely to prove successful.

3. Preventive War Potential: Considered an undesirable capa-
bility (vs. S.U.) and is deliberately designed out of the posture forces.

4. <u>Type II Deterrence</u>: Not included to any significant extent.

5. <u>Graduated Deterrence</u>: Include enough war-fighting capability and Type I Deterrence to make this a possibility.

6. <u>Threaten Inadvertent Eruption</u>: Some further reinforcement of extended deterrence would be derived by this being inherent in the strategy.

7. <u>Adaptability</u>: This may be achieved, in a small degree, by the inclusion of more flexible offensive forces and active and passive defense.

8. <u>Technical Safety</u>: Better than in FD because of the control. A major reason for preferring MFD to FD.

F. <u>Typical Capabilities</u>:

1. <u>Offensive Weapons--Numbers, Kind, Basing</u>: The number of weapons is more or less determined by the Finite Deterrence calculation. For example, one might require a capability of destroying 10 to 200 major cities by reflex action. The force could therefore range from small (50 to 200 deliverable weapons) to moderate size (200 to 1,000), all hardened, mobile, or otherwise protected. Additional forces necessary to give a small degree of war-fighting capability are to be included.

2. <u>Active and Passive Defense</u>: Since the emphasis of this strategy is placed on the ability to deter a large attack on the U.S., both types of defense might be given low priority. Those who are serious in their intent to be less stark could advocate the inclusion of some degree of each defense, but only so long as the U.S. would not appear threatening, nor appear able to absorb so much of the shock of an attack that the other side feared for the adequacy of its Type I Deterrence. Basically all that is required and permitted in this strategy are enough active and passive defense to protect civilians and their property from collateral or accidental damage, in a war against the S.U.

3. <u>Command and Control</u>: Command and Control should have the capability and flexibility to fire only a portion of the force, to allow for wartime bargaining, damage assessment, and negotiation with the attacker.

4. <u>Intelligence</u>: Some awareness of the capability and plans of potential opponents would be useful for implementing the strategy; and some knowledge of attack success and postattack environment desirable.

G. <u>Likely Tactics</u>: Mostly deterrence by reprisal. Prewar declaratory policies could be the same as Finite Deterrence or could reflect contingency plans: postattack policies will actually be controlled by the character of the war but there remains some chance of a spasm response

to a first strike. Particularly if there is a large and moderately pro-
tected force, strikes that improve our bargaining position, such as an
exemplary attack or a constrained counterforce strike, may be used.

H. Level Seven Considerations: To the extent that it is necessary
to explain the sub-tactics to "everybody" the strategy is not likely to
get much support except among "leftist" intellectuals. (The idea of pro-
curing defenses, which can be said to work only if the enemy cooperates,
is likely to look bizarre to almost everybody.) However, if the active
and passive defense are dismissed as window dressing (i.e., SC motiva-
tions) or overestimated so that the strategy looks DI, it is probably
acceptable. There is probably no difficulty in looking like SC to one
audience and DI to another.

I. Other Comments: Depending on the S.U. response, the improved
War Outcome may be effective or simply a facade added to reassure those
who would otherwise be alarmed by the stark all-or-nothing characteristic
of Finite Deterrence only.

5. War Stopping (WS)

A. Introductory Comments: To support this strategy an overwhelming force is needed so that there will be no worry about arms races, techno- logical breakthroughs, or ingenious tactics degrading the national ability to overkill an enemy. This offensive power would be substantially invul- nerable and would enable the possessor to fight a controlled war (Deter- tence by Reprisal) and still retain the capacity to threaten annihilation, no matter how many times the enemy has attacked. This should induce the enemy to stop the war rather than run even a small risk of a spasm res- ponse by the remaining force--especially since he has little to gain by continuing. However, by design as in MFD, there is not enough active and passive defense to weaken the opponent's Type I Deterrence.

Proponents of WS make the assumption that deterrence is not easy and that overwhelming strength would both improve survival chances (by making war controlled if deterrence fails) and be more likely to deter.

B. Sub-Themes:

1. Emphasis on need for large forces to insure against techno- logical breakthrough, enemy cleverness, or our own mistakes.

2. Emphasis on making war unthinkable--or at least useless.

3. Emphasis on use of Deterrence by Reprisal to increase credi- bility of deterrence.

C. National Goals: Eliminate Central War and Central War threats as an instrument of policy by making it starkly useless as well as unthink- able without going to Doomsday-type systems. The most important objective of the military forces if a war starts is to stop the war; this is more important than trying to achieve postwar political advantages by wartime acts. There may also be a desire to assure that a nation inflicting the outrage of a nuclear war on us will not escape with less damage than it deals out.

D. Political-Military Analysis: Some of the advocates of this stra- tegy argue that it will also improve the deterrence by making deterrence depend more on "warning" than on "threat." The declaratory policy also makes clear the nonaggressive character of the defense establishment and to some extent adds to a feeling that if war is not unthinkable, it is at least useless.

The prevention of war and arms races is given highest priority and there is a corresponding willingness to spend money for these ends. Esca- lation Adequacy is achieved only through Assurance, and Assurance is achieved to some extent by the overwhelming size of the force. Its size would eliminate the obvious reasons for an enemy to attempt degrading it by striking first or for us to need to use it before we are attacked:

thus there is a reduced likelihood of inadvertent war. With the U.S. so
well equipped, some allies would feel less need for independent deterrents
or nuclear sharing even though Type II Deterrence is specifically eschewed.
The ability to control one's own responses will offer an added degree of
stability.

This strategy would be highly debated domestically. The cost of such
a force would seem excessive though it could also be argued that it is
actually economical in the long run. It is simple and would not require
much diversity of capabilities or need to be adapted to arms races or the
changes in technology that can be anticipated.

This strategy would find many enemies among those who adhere to Deter-
rence only positions, particularly Minimum Deterrence, on grounds that
this approach violates all restraints. Considering the procurement and
operating costs there might be strong economic objections, but these are
likely to be exaggerated. While this strategy might have operational and
strategic advantages, unless it is achieved very rapidly and completely,
the transition might unleash an arms race of extreme proportions. The
Soviet Union might feel gravely threatened, international stability might
be cast to the winds, and national resources drained in a dangerous and
undesirable way.

E. Central War Purposes:

1. Type I Deterrence: Emphasized almost to extreme.

2. Improved War Outcome: Requirements are satisfied by the
expectation of reduced damage because of the hope if deterrence fails
that the war will be controlled. These expectations and hopes are made
plausible by the forces and tactic .

3. Preventive War Potential: Specifically omitted as far as a
major opponent is concerned.

4. Type II Deterrence: Deliberately omitted as far as a major
opponent is concerned.

5. Graduated Deterrence: Partly included because of the domi-
nant military position, by assuring stability, makes Deterrence by Repri-
sal possible.

6. Threaten Inadvertent Eruption: This possibility is deliber-
ately omitted. But even if the probability is low, the consequences would
be so awful that its deterrent effect is likely to exist.

7. Adaptability: Considered to be inherent.

8. Technical Safety: With a force this size, safety would be a
major consideration and effective measures would be necessary: however,
the force size also makes stringent safety measures more readily acceptable.

F. Typical Capabilities:

1. Offensive Weapons--Numbers, Kind, Basing: Very large forces (e.g., 5,000 Minuteman, 200 Polaris submarines) with varied characteristics, all protected and reliable.

2. Active and Passive Defense: Both types of defense would be required to alleviate and limit the consequences if the enemy launched counterforce, reprisal or exemplary attacks. (With this posture even an all-out counterforce attack is likely to make as little difference to strategic execution of the retaliation as a small exemplary attack.) Defenses would be comparable to those for MFD in that countervalue targets not endangered by their proximity to counterforce targest would be largely undefended.

3. Command and Control: It would be essential for this element of the force to be extremely efficient because of the large size of the force. Ability to survive would also be essential for executing reprisal-tailored-to-provocation attacks.

4. Intelligence: Not a pivotal factor in this strategy, thus reducing one of the usual problem areas, except for information needed for reprisal targeting.

5. Operational Capabilities of All These: Less critical in this strategy than in most.

6. Tactical and Strategic Skills: All aspects of bargaining and punishing will be utilized by this strategy should war occur. Reprisal attacks may be varied according to degree of punishment or need or desire to escalate or de-escalate (not likely the latter).

G. Likely Tactics: Threaten a tit-for-tat reprisal to any kind of attack that the other side makes, at the same time announcing that one is willing to call the war off on the basis of status quo ante. Announce this policy ahead of time. The action and declaratory policies are identical. There are no overt or covert plans to strike first.

H. Level Seven Considerations: Hard to explain the nonaggressive nature of WS, and to convince friends and foes that the aim is to decelerate the arms race.

I. Other Comments: The above strategy is likely to teach the enemy to fight a controlled war, and he may become more successful at this than we would like. It also reduces the probability of accidental war because it reduces the likelihood of uncontrolled responses in reaction to incidents.

6. Arms Control Through Defense (ACD)

A. **Introductory Comments**: This strategy tries to avoid some of the difficulties of arms control agreements to limit offensive capability by permitting or encouraging both sides to have highly effective active and passive defense. One purpose is to guarantee each side that if the other side cheats, it will not gain an overwhelming advantage. Another purpose is protection against Nth countries. A third is to get the country out of the business of offering its population as (involuntary?) hostages.

B. **Sub-Themes**: A large number of sub-themes go with ACD. It is probably simplest to go through the combinations obtained by combining ACD with other ACWS themes.

ACD-MD-1. Active and passive defense for the offensive force, which may not be clearly adequate, but increase the uncertainty of the attacker. MD tends to depend upon uncertainty, and defense can increase this uncertainty in a desirable fashion.

ACD-MD-2. Small offensive forces with some or all of the defense put around the cities. It is then not clear that the small offensive forces will be able to penetrate in a second strike. In some sense this is similar to MD, except that in MD there was uncertainty whether the force could survive and strike back. In ACD-2 we have little or no uncertainty that the force will survive, but there is uncertainty that it will penetrate. This is, however, a somewhat more stable situation than with ordinary MD; now it is likely that the attack will be able to destroy large amounts of property (most likely by thermal and blast effects from bursts at a high enough altitude to be above the effective capability of the ABM). It is also likely that uncertainty of penetration is a more reliable deterrent than uncertainty of survival, because survival is usually much easier to calculate than penetration.

ACD-FD-3. As in ACD-1, we can have smaller forces if we use active and passive defenses to protect them. We then do not have so large a first-strike capability as a by-product of our need for second-strike capability.

ACD-FD-4. As in ACD-2, with enough defense so that the other side, by concentrating its attack, can destroy a fixed number of cities but not a great many more. This puts a limit on the retaliation damage. If both sides have their forces targeted countervalue against the assumed target system, this is an ACD strategy in the FD spirit. One can even have the assigned "hostages" unprotected and all others very well protected. (We may accidentally get this condition in practice in DI. It seems to be possible to protect people and recuperation capability, but not wealth. This unprotected wealth is then the assigned hostage.)

ACD-SC-5. Some arms controllers may not feel it is necessary or desirable to have defense as part of an arms limitation agreement on offensive weapons. However, they may also feel that they will not be able to negotiate the agreement if people feel naked. Therefore they may wish some kind of facade defense to enhance feelings of security and trust.

ACD-MFD-6. As in ACD-4, except that the targeting and tactics are more flexible and the declaratory policy reflects this flexibility.

(ACD-WS is skipped as a contradiction in terms.)

ACD-DI-7. This is the basic ACD posture. The offense has been limited enough so that defense works quite well (one really does get insurance). This posture has been combined with declaratory and possibly contingency and action policies of no first strike.

ACD-EI-8. Same as ACD-7, except there is a hidden attempt to get high-quality weapons systems so that there will be no loopholes that the enemy can detect and so that one will have a great enough confidence in the posture that he may be willing to stake the nation's future on the performance of the defenses.

ACD-LSR-9. An announced policy that one will not go to a large war if provoked, but that one will use nuclear weapons in small exemplary attacks. Can be combined with any of the other ACD policies.

ACD-NCF-10. Similar to ACD-8 and ACD-9 with the addition of a declaratory policy that one will go to war if provoked (or at least a declaratory policy that creates uncertainties and ambiguities about one's intentions).

ACD-CPW-11. If the two sides are symmetric and there is no great first-strike advantage, it is not clear what is gained by resort to war. However, one side may feel that a negotiated peace treaty arising out of even an inconclusive war could be better than acquiescing in some provocation. It might also feel that it could calculate and announce dividing lines. In this case, one would have an ACD policy with a CPW theme.

ACD-CFS-12. Similar in spirit to the previous strategy.

ACD-NMR-13. A seeming contradiction in terms. However, one could have ACD and still threaten to launch a large countervalue attack, if one was provoked, and accept the other side's retaliation. Because the damage will be limited, the declaratory and action policies are more consistent with ACD capabilities than without.

ACD-PMR-14. A similar modification as done to NMR in ACD-13.

C. National Goals: Arms control of some sort is essential. This form is relatively safe and may have a large number of adherents on both sides of the Iron Curtain. ACD may preserve the possibilities of war or an accelerated arms race as usable but unlikely instruments of policy. It also makes available most of the options on the escalation ladder but in somewhat safer form (i.e., it restores the possibility of having a war or

escalation with non-bizarre tactics). It also seems to fit in with most other U.S. goals--except possibly some alliance requirements, which, however, are presumably limited in an environment in which ACD is acceptable.

D. Political-Military Analysis:

1. Efficient Use of National Resources: Because of the large requirements for active and passive defense this strategy could be relatively expensive in dollars at least in the initial stages. However, it does not make any extra-ordinary requirements in leadership, intellect, organizing ability, etc., except that we stay competent about defense even in a detente atmosphere.

2. Escalation Adequacy: Because of the arms control agreement both sides can only make symmetrical threats against one another. Because of the limited number of weapons, the threats and warnings that can be exchanged must be limited and because of the active and passive defenses, the fear of an eruption is greatly lessened. (Depending on the issue involved and the degree of disarmament, the probability of eruption may or may not be lessened.) It is not likely that there will be anything like massive retaliation in this strategy, because the cities are so well protected, and there would be a certain reluctance to expend a large fraction of a limited force of missiles against ABM. Nuclear reprisals, if they occur at all, are likely to involve relatively innocuous targets or property in cities.

3. Assurance: This strategy provides a great deal of Assurance since it promises to control the arms race, is defensive, protects against all-out escalation, and may retain reasonable Type I and even Type II Deterrence.

4. Alliance Cohesion: Very probably the arms control agreement would involve some sort of political settlement with the S.U., probably including recognition for the Soviet position in the satellites. Excepting this, the strategy is compatible with a number of considerations in Alliance Cohesion. However, the weakened Type II Deterrent or the lessened sense of threat that the agreement is likely to bring may lead to disintegration of the alliance, or at least the weakening of ties, a consideration that may have advantages and disadvantages.

5. Stability to External Shocks: Except during the transition to this strategy, ACD is not particularly dependent on any particular configuration, military, political or otherwise, and since it has a high degree of technical safety, it is satisfactory in this respect. The reduction of force need not reduce stability--the difference between 200 and 400 missiles, for instance, is not likely to lessen deterrence, particularly. When the offensive force comprises much less than 50-100 missiles, the balance of nonnuclear forces becomes important and stability will depend greatly on them. If there is a reduction of force to such small levels, there will be a period of instability in the transition during which other political-military factors will be critical. A miscalculation (or even a correct calculation) may show that war is advantageous

to one side or the other if the transition period is not carefully ar-
ranged and if it is not sufficiently short to be substantially free of
tension.

6. <u>Arms Race Deceleration</u>: Since there is always a possibility
for a break-through in defense or offense which will give one side or the
other extreme confidence in its capabilities, there is likely to be ex-
tensive research and development, unless this could also be controlled
under the agreement. Since both sides are far from over-kill capability,
an increase in the defensive capability or the penetration capability by
a factor of 2, would double or halve the threats on one side or the other.
Thus increased knowledge or technical ability may be worth a great deal
if the offensive forces are not below the threshold at which defenses
become clearly dominant and immune to reasonable changes in the threat.
In any case, there is no longer a race in numbers. Such an agreement
might also set a precedent in establishing active and passive defenses
as an important element in nuclear strategy which would be followed by
future nuclear powers.

7. <u>Specific Arms Control Measures</u>: This strategy is compatible
with a very large number of measures short of total disarmament and even
with total disarmament--since in a limiting case which may be of theoreti-
cal interest only defense will tend to atrophy after offense is eliminated.

8. <u>Capability against Unorthodox Opponents</u>: The strategy in
some forms includes this to a high degree since it attempts to preserve
a war surviving capability against all kinds of attacks, making it less
vulnerable to Nth country opponents, blackmail tactics, and the like.

9. <u>Political Acceptability</u>: Very high, since it doesn't require
or make any special demands on any internal or external institutions if
the understanding arrived at regarding Europe continues to be acceptable
to those involved.

E. <u>Central War Purposes</u>:

1. <u>Type 1 Deterrence</u>: This strategy accepts the possibility
that there could be very little retaliation if the enemy's defense system
were unexpectedly efficient. It assumes that reasonably assured severe
damage to (and possibly destruction of) several cities (5 to 10 cities,
say) plus the possibility of even greater destruction, should be adequate
to achieve acceptable Type 1 Deterrence. The expectation of damage can
vary greatly depending on the type of restraints for offensive weapons.
Assuming there is no change in the world political system, world-order
will tend to be a product of multi-stability. The fear of war will not
deter so much, but the total power realities will play a far greater part
in political arrangements.

2. <u>Improved War Outcome</u>: This strategy imputes a high value to
this purpose and for this reason has limited the number of missiles on
each side and included an adequate active and passive defense system.

3. <u>Preventive War Potential</u>: Under the arms control agreement outlined this capability is less needed, but may remain to some degree--particularly against Nth countries.

4. <u>Type II Deterrence</u>: As above, the necessity for this capability is decreased by the arms control agreement, but some capacity still remains (i.e., multi-stable deterrence).

5. <u>Graduated Deterrence</u>: Under certain circumstances this capability would be included but again need for maintaining this type of deterrence would be decreased by the political agreements.

6. <u>Threatened Inadvertent Eruption</u>: It can very much afford to do this because of its strong position in Improved War Outcome; but, at the same time it would not be as effective as with some other strategies because of the high defense capabilities.

7. <u>Adaptability</u>: This is one of the most important qualities of this strategy. Because the agreement has only reduced the number of missiles and made it symmetrical, retaining the war fighting capability, the nation could adjust rapidly to changing conditions.

8. <u>Technical Safety</u>: Because the forces are relatively invulnerable to attack, neither side would be trigger-happy. The large amount of passive and active defense of both sides make each side competent to handle accidentally fired missiles. Although not especially destabilizing, nuclear-armed defensive weapons would constitute a source of danger.

F. <u>Typical Capabilities</u>:

1. <u>Offensive Weapons</u>: As described, a limited missile force that could be protected by hardness, mobility or active defense.

2. <u>Active and Passive Defense</u>: These defenses should be effective enough so that even if the other side cheats to the extent of having twice the missile force agreed upon, the maximum damage would only be about double (from 5-10 to 10-20) if the other side launched its complete missile force at cities. In addition, there could be active defense of the missile sites, further decreasing their vulnerability. Ten to twenty billion dollars a year would be a reasonable amount to devote to these defenses.

3. <u>Intelligence</u>: This would presumably be supplied by inspection under the arms control agreement, but independent surveillance capabilities might be desirable.

4. <u>Command and Control</u>: About the same as in the other war-fighting strategies. There might be more elaborate provisions for communication between the two opponents; indeed, provisions for such communication are likely to be part of the arms control agreement.

5. <u>Operational Capabilities of Above</u>: Same requirements as
for any of the war-fighting systems.

6. <u>Tactical and Strategic Skill</u>: This strategy is compatible
with a simple spasm-response doctrine or the most complicated of the con-
trolled calculating responses.

G. <u>Likely Tactics</u>: Tactics may vary as in other war-fighting stra-
tegies.

H. <u>Level Seven Considerations</u>: In its less extreme forms ACD is
comparable to MFD or DI: in its more extreme forms ACD is an avant garde
strategy which may find acceptance only under special circumstances, and
then only in the wake of careful educational programs for the benefit of
intellectuals. The economical and technical feasibility of ACD will vary
with changes in R&D results. It may founder or succeed as a result of
self-fulfilling prophecies that emphasize or de-emphasize defensive R&D
and procurement.

I. <u>Other Comments</u>: Even those who are in favor of arms agreements
might argue that such a strategy seems an elaborate, expensive and pos-
sibly dangerous way to arrive at no conclusive change in the nuclear
stalemate--even if it were technically and financially possible to achieve
ACD, the associated political agreement obtained in 1963, might erupt into
an international dispute having new poles and dimensions at some later
time. Another argument would be directed against what seems to be too
sanguine an assumption that this type of strategy would alleviate Nth
country problems. On the contrary this might seem an opportunity for
smaller countries to gain superiority if the forces of the great nations
decay too far.

7. Deterrence Plus Insurance (DI)

A. Introductory Comments: A more war-capable form of MFD. It
tends to have the same objectives as Finite Deterrence and much of the
posture of Not Incredible Counterforce First Strike (NCF) described be-
low, while specifically eschewing the threat of war or the attempt to
derive foreign-policy benefits from central-war forces. Shores up one
weakness in the credibility of a Deterrence Only strategy by having an
alternative to suicidal retaliation; and has some residual First Strike
Capability (which is officially denied) so that there are more limits
(than with MFD) on how provocative an enemy will get. Is very conscious
that whatever measures are taken, the possibility still exists that these
weapons will be used, and one must be prepared to fight, survive, and
perhaps to win.

B. Sub-Themes:

DI-1. Central Deterrence by Central Reprisal: Believes it is
necessary or desirable to have a strategic alternative
to making a large-scale countervalue attack if deterrence
should fail. Tries to fight in a calculated manner aimed
at limiting damage and ending the war "acceptably," if
a nuclear war should come, but is more interested in
ending the war than in "winning" it. Intends to fight
a controlled war if attacker gives that option but also
intends to possess enough active and passive defense so
as to guarantee, or at least make likely, the survival
of the nation as a nation. Will retaliate to limited
attacks with apposite or otherwise appropriate reprisals.

DI-2: Deterrence by LSR: Combines DI with LSR as a major but
lesser theme. The ability to limit damage is believed
to be an essential element of the combination as it
provides the assurance necessary to risk eruption.

DI-3. War Winning Objective: While there is no intention to
use First Strike threats, if deterrence does fail, then
the nation might as well try to settle some of these
major problems--at least for the next decade or two--
if not for all time.

DI-4. Flexible Response: A mixed declaratory policy with
(possibly contradictory) elements of DI-1, 2, and 3.
Both the contingency plans and action policy call for
waiting until the event, before one decides what to do.

C. National Goals: The most important assumption is the belief
that in spite of all of our efforts, war can still occur and that it is
better to survive a war than not, and, other things being equal, better
to win than to stalemate, and better to stalemate than to lose. The
second is that just a latent threat of LSR, NMR, or NCF is sufficient
to handle our crisis and Type II Deterrence problems, particularly

because these latent (and publicly denied) capabilities have been made
credible by the preparations to limit damage. However, there may be as
much SC as concern with objective capabilities in these damage limiting
capabilities (i.e., we could have defined a DI-5: Type I Deterrence +
SC). There may also be much concern with having NCF, CFS, or CPW capa-
bilities against Nth countries.

D. Political Military Analysis: Under some circumstances a more
credible threat of less destruction may be more deterring than an incred-
ible threat of large destruction as in the FD or even CH strategies, i.e.,
the threat of retaliation if it amounts to a promise to commit suicide
is intrinsically incredible. Therefore, a more credible threat of less
destruction may be more deterring, or at least not much less deterring,
than the threat of automatic all-out retaliation. DI has other advan-
tages too. In particular, if deterrence does fail anyway an attacker may
be induced to hazard a constrained disarming attack in the hope that the
defender will limit his retaliation. DI also assumes that it is possible
to have such a great deal of Improved War Outcome without incurring the
political and arms race costs of the (NCF) strategy. This is done by
taking care clearly to design the posture so that the war-threatening
policies of NCF are neither intended nor perhaps quite feasible.

While a high probability that a sizable nuclear retaliation would be
forthcoming would probably be adequate to deter an enemy from striking in
cold blood or under the impetus of a moderate crisis, none of the Deter-
rence Only strategies can guarantee the effectiveness of deterrence under
conditions of extreme strain. There is just too much possibility of war
by accident, miscalculation, unauthorized behavior, emotional reactions,
etc., to ignore the possibility. For the other military-political re-
quirements:

1. Efficient Use of National Resources: Not a first-priority
requirement, but not seriously violated either.

2. Escalation Adequacy: This factor is considered of some
importance and the strategy contributes by having Assurance and some
residual Type II Deterrence.

3. Assurance: The Improved War Outcome defense systems included
should add to the feelings of security both at home and abroad and reduce
the fear of threats.

4. Alliance Cohesion: Not of direct concern, but not strained
by this strategy--allies may misread war-fighting capability as giving
adequate Type II Deterrence in spite of declaratory policy.

5. Stability to External Shocks: This kind of stability has
been enhanced through the inclusion of flexibility and survivable forces.

6. Arms Race Deceleration: Often a primary but not overriding
objective. The arms race may be tranquilized to some extent by nonaggres-
sive and prudential character of the strategy.

7. <u>Specific Arms Control Measures</u>:   None required.

8. <u>Capability Against Unorthodox Opponents</u>:   Some capability is afforded because of the war-fighting capability.

9. <u>Political Acceptability</u>:   Except for possible alliance problems it is very acceptable.   Some FD proponents would argue against this strategy on the grounds that the effectiveness of deterrence is degraded by allowing for alternatives.   It is not a rationality-of-irrationality (or committal) strategy and the prospect that retaliation would not be automatic could compromise Type I Deterrence.

E.   <u>Central War Purposes</u>:

1. <u>Type I Deterrence</u>:   Included.

2. <u>Improved War Outcome</u>:   Important to the extent that it does not compromise Type I Deterrence.

3. <u>Preventive War Potential</u>:   Not an immediate requirement or goal, but not precluded by the strategy.

4. <u>Type II Deterrence</u>:   Not a primary consideration, but not completely precluded.

5. <u>Graduated Deterrence</u>:   While this particular capability is not emphasized in most versions of the strategy, the flexible command and control and war plans make the capability, to some degree, an automatic byproduct.

6. <u>Threaten Inadvertent Eruption</u>:   A possible method of achieving some political advantage in a crisis.

7. <u>Adaptability</u>:   This strategy stresses this as a major consideration.

8. <u>Technical Safety</u>:   Measures would be taken to build this into the system.

F. <u>Typical Capabilities</u>:   "Invulnerable" force small to moderate in size; good survivable command and control--ability to hold response, gather and process information, communicate with enemy as well as own forces; flexible targeting, selective release, active and passive defense-- i.e., good war-capable forces.   Strategy also requires good intelligence and information of the success or failure of our attacks, amount of damage inflicted and suffered.   Knowledge of the capabilities of the opponent would also be desirable throughout the period necessary to achieve this capability.   Excellent tactical and strategic skills are of paramount importance to the execution of the intents of this strategy which relies on the ability to regulate responses and execute controlled attacks.

G. <u>Likely Tactics</u>: Threaten appropriate retaliation if the U.S.
were to be struck (see 7 B). If Type I Deterrence fails, fight a con-
trolled war, using a combination of countervalue exemplary and constrained
counterforce attacks and blackmail to persuade enemy to accept a reason-
able peace treaty.

A threat of all-out retaliation might have advantages; an attacker
who is planning an attack is likely to be careful in his targeting in the
hope that the defender will counterattack rather than retaliate. This
possibility, if realized, would sharply reduce the costs and risks to the
attacker. It may even induce him to hazard a controlled disarming attack
and risk a larger retaliation. If the defender chooses to retaliate all-
out he could expect that the enemy will probably retaliate in kind. How-
ever, the defender might feel that if the attacker were hit with a care-
fully planned exemplary attack plus a blackmail threat or a constrained
counterforce strike which tips the military balance against him, he will
probably react rationally and choose to negotiate terms rather than strike
again. Since this outcome is much preferable to the first, the defender
is likely to choose the exemplary or a constrained counterforce attack in
reply to a careful counterforce attack.

H. <u>Level Seven Considerations</u>: Most naturally acceptable of the
strategies. It is defensive and prudential and yet does not seem irre-
sponsible. Makes reasonable, but not excessive demands on various aspects
of U.S. life and resources.

I. <u>Other Comments</u>: Current emphasis on "damage limiting" fits in
very well with this strategy and is likely to replace the term Improved
War Outcome (which also tries to improve the military and political out-
come) because the latter term has aggressive or "reckless" overtones.

8. Expanded Insurance (EI)

A. Introductory Comments: Very briefly DI + Assurance + hidden CPW. Thus this strategy incorporates two options in addition to those desired in Deterrence Plus Insurance outlined above: (1) preparation for mounting a disarming first strike if imminence of Soviet attack or extreme provocation and the expectation of worse make this advisable, and (2) capability to endure crises because the high-quality deterrence reduces the probability of war and the more adequate insurance would tend to alleviate the consequences, if deterrence should fail. Except for the Type I Deterrence neither of these options would be declared, and they would, in fact, be deliberately kept as invisible as possible so as not to increase Soviet fears. By the same token the possibility of a first strike would no longer be used for deterrence. In the case of eruption, the strategy would include war-controlling tactics in the hope of rational enemy reaction.

This is probably the most prudential and hedged of the strategies. Proponents feel that Deterrence Only postures are not completely credible or safe. They also feel that threatening is unwise. Most important of all they feel that to the extent that money can add to our safety, we should use it.

B. Sub-Themes: Same as DI except the extra capability makes it more likely that "war winning" objectives will be chosen if deterrence fails.

C. National Goals: Emphasizes the National Interest, particularly physical security, but does not wish to pursue it in either a self defeating or single minded fashion, so makes appropriate concessions, compromises, and hedges to the other goals. Also believes very strongly that (1) The nation must be prepared for the possibility that a situation can arise in which a pre-emptive or preventive war is necessary. (2) The nation must be willing to stand firm in a crisis. This strategy is also deeply concerned with being adequately in business when Nth countries arrive seriously on the scene.

D. Military-Political Objectives:

1. Efficient Use of "National Resources": Not a primary or even worrisome consideration, but not a wasteful or profligate strategy considering the stakes thought involved.

2. Escalation Adequacy: Included at a high level.

3. Assurance: Held as being of prime importance and more realistically achieved than by other deterrent strategies and DI.

4. Alliance Cohesion: Not considered likely to be disruptive.

5. Stability to External Shocks: Same as DI, with the added option of an expected success of first strike.

6. <u>Arms Race Deceleration</u>: The very existence of such large diversified offensive forces represents a potential cause for an arms race. Highly mindful of this, this strategy goes out of its way to conceal or minimize its aggressive potentialities, foregoing any foreign-policy bene-fits that might be derived from them.

7. <u>Specific Arms Control Measures</u>: Not included.

8. <u>Capability Against Unorthodox Opponents</u>: Included to a higher degree than most previous strategies.

9. <u>Political Acceptability</u>: Perhaps controversial because of the implicit first-strike potential, but also aided by concealment and de-emphasis. But still those who fear disruption of the system by any increase in the pace of the arms race, or those who feel a first-strike ability contrary to American values might object to this strategy.

E. <u>Central War Purposes</u>:

1. <u>Type I Deterrence</u>: Included.

2. <u>Improved War Outcome</u>: An important almost obsessive goal.

3. <u>Preventive War Potential</u>: An invisible but important goal.

4. <u>Type II Deterrence</u>: Conditional attribute, but one speci-fically abjured in the declaratory and peacetime action policies.

5. <u>Graduated Deterrence</u>: Included as highly important.

6. <u>Threaten Inadvertent Eruption</u>: Not a stated goal, but also a possible latent capability.

7. <u>Adaptability</u>: Afforded to high degree.

8. <u>Technical Safety</u>: No less than other war-capable strategies.

F. <u>Central War Capabilities</u>

1. <u>Offensive Weapons--Numbers, Kind, Basing</u>: Somewhat more than the moderate, protected force of DI. In particular somewhat more first-strike disarming capability and better protected second-strike forces.

2. <u>Active and Passive Defense</u>: Good coverage in both of these. May emphasize such "non-provocative" capabilities as very adequate ($10-$30 billion) recuperation capabilities.

3. <u>Command and Control</u>: The same requirements as DI except are even more willing to spend for quality and capability.

4.   Intelligence: As in C&C.

5.   Operational Capabilities of all these: As in C&C.

6.   Tactical and Strategic Skills: As in C&C with the addition
of thought about U.S. first strikes.

G. Likely Tactics: (Aim not only at limiting damage and ending war
acceptably but also at improving military outcome: Avoiding military
defeat, achieving stalemate or, preferably, military victory (possibly
some compromise of deterrence and stability, but strains on these to be
counteracted so far as possible, e.g., by larger survivable retaliatory
force and the arms control measures mentioned; no measures to be taken,
in terms of type or extent, which threaten seriously to jeopardize deter-
rence or stability), particularly if their effectiveness in improving
outcome seems doubtful.)

Attempt to avoid provoking all-out arms race, possibly by restraining
levels of forces and defenses below levels otherwise desirable.

Make no attempt to achieve high-confidence capability to limit damage
or win military victory under all strike-second circumstances (i.e., all
Soviet offensive/defensive postures and tactics, all circumstances of war-
initiation); aim merely at capability that will improve outcome under many
circumstances, though it may do very well or very poorly under particular
conditions.

Be willing to "pay more" to avoid visibly increasing first-strike,
as distinct from second-strike, capability to improve war outcome (though
no attempt to reduce first-strike capabilities not likely to be apparent
to Soviets, or not otherwise unstabilizing).

Mixed force of varied capabilities, including some large-yield and
some high-precision weapons;

Enlarged reconnaissance and surveillance program, both prewar and
postattack;

Some forces capable of fast response, though preferably not dependent
on this for survival;

Highly survivable command and control system, capable of both fast
and delayed flexible responses with monitoring and feedback control of
operations, capable of processing intelligence, reconnaissance, surveil-
lance and status data both prewar and postattack and conducting limited
or all-out counterforce operations as well as demonstrations, limited,
retaliation, and intra-war negotiation:

War plans are almost entirely for strikes against enemy bases
and forces; limited city attacks only if necessary to implement threat-
strategies; plans include contingency plans for less than all-out strikes
(limited general war);

Bilateral and unilateral measures to decrease chance on <u>both</u> sides
of accidents, unauthorized action or false alarms (e.g., decrease Soviet
reliance upon fast reaction to ambiguous warning);

But otherwise no special efforts to induce Soviets to reduce vulner-
ability of their forces; retain capability to discover and exploit these
vulnerabilities;

Survivable bomber defenses good enough at least to prevent Soviet
free ride;

Declaratory intention to strike enemy base or city targets, depending
on which declaration it is believed will produce a stronger and more cre-
dible Type I deterrent.

H.   <u>Level Seven Considerations</u>: Much the same as DI, except that it
requires greater prudence, perseverance, discretion, and long-term planning
than may be available. (See quote from de Tocqueville on page 320.)

I.   <u>Other Comments</u>: The editor's choice under current conditions[1]
for the end of the Decade if combined with an independent nuclear deter-
rent for Europe and perhaps Japan.

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[1]Under possible conditions he would prefer ACD.

9. Contingent Homicide

A. <u>Introductory Comments</u>: This strategy is a vastly enlarged form
of Finite Deterrence (either little or no war-fighting capability included)
for deterrence of attack against the U.S. and other contingencies; the
usual "contingency" being the possibility of a first strike in response to
acts of extreme provocation such as an attack on Europe). The intent is
to establish a deterrent force so large and to display resolve or auto-
maticity to such an extent that the resulting graphic picture of total and
inevitable annihilation could not be ignored by a decision-maker contem-
plating any extremely provocative act covered by the contingency plans.

B. <u>Sub-Themes</u>:

CH-1. <u>Thinking is Dangerous</u>: Any thought, calculation or analy-
sis of the requirements of Central War will corrode our
morale. It is best to simply commit oneself to some de-
terrent tactic and then accept this committal as a given--
indeed as a part of nature.

CH-2. <u>Deterrence is Everything</u>: Improved War Outcome is either
not feasible or not feasible enough. It is important not
to allow the enemy any grounds for wishful thinking.

CH-3. <u>Deterrence is Not Easy</u>: It must be absolute to be sure.
(See pages 212 to 213 for difficulties.) There is no
alternative to this kind of total threat, reinforced by
resolve or automatic mechanisms.

C. <u>National Goals</u>: To deter major attack on U.S. or NATO.

D. <u>Military-Political Analysis</u>:   Assurance (internal and narrowly
defined) and Capability Against Unorthodox Opponents are the only objec-
tives under consideration by those who advocate this strategy, and it is
assumed that these are all achieved by extreme deterrence. Alliance Co-
hesion may be assumed enhanced by the inclusion of Europe in the contin-
gency and it is not likely, if there is no overwhelming crisis or U.S.
debate, that there will be much alarm about credibility. However, to a
non-believer, particularly one armed with our list of purposes and objec-
tives, this strategy appears to have serious limitations. Even those
areas that are supposed to be covered are dubious: what Assurance can
there be if deterrence becomes a two way street under the threat of even
inferior but adequate enemy forces. Contingent Homicide is only too
likely to be mutual homicide since no alternatives are provided. Credi-
bility, and hence deterrence, tend to disappear, particularly when ex-
tended to deter attacks against Europe. Also with the likely possibility
of mutual homicide being the result, there are strong reasons for not
wishing to use the threat of inadvertent war--or even to stand firm in a
crisis.

Thus while this strategy can illustrate principles that otherwise
would be very difficult to explain, its major usefulness is likely to be
as a conceptual tool and illustration rather than as a likely preferred
strategy. For example, it can be used as a very convincing example of
why increasing deterrence at any cost can be a mistake. The mutual homi-
cide is so stark and unbelievable that even some deterrence enthusiasts
withdraw in horror. Unfortunately many others are beguiled by its simple
and overwhelming character. We indicated in the text that Khrushchev
claims to belong to this school. He has many colleagues among laymen
and "non-intellectual" professionals. Nevertheless it is very likely to
lead to pre-emptive and preventive surrender (or accommodation) policies.

    E. Central War Purposes: Deterrence and alliance cohesion are
essential. These are obtained by having an absolutely overwhelming Type
I Deterrent and other forces so that no opportunity and no provocation of
ours could make it rational for the other side to attack or even to risk
our attack by seriously provoking us.

The system should be designed with such a margin of stability that
it is very unlikely to go off inadvertently--i.e., there is no margin for
error, miscalculation, emotion, or irrationality on the part of either
defender or attacker. The stark picture of total and inevitable annihi-
lation that cannot be misunderstood by any conceivable enemy decision-
maker means that the threat is so great that even a small credibility
will suffice to deter. (The credibility will be small because the stra-
tegy does not make provisions for war-capable forces.)

    F. Typical Capabilities: Similar to the Finite Deterrent but some
five to ten times larger than the moderate level. (Say, 1,000-10,000
delivery vehicles of a range of characteristics.)

    G. Likely Tactics: Almost identical with Finite Deterrence except
that Europe is included under the umbrella. Thus a Declaratory policy
of striking first with all-out nuclear attack under specified "provocative"
conditions (e.g., a major Soviet attack on NATO);

Plans and machinery to launch massive "obliteration" attack under
those or some of those conditions, response being fast and highly auto-
matic (without reference to its "rationality" under those conditions).

    H. Level Seven Considerations: This concept was probably satis-
factory to the U.S. and NATO public and decision-makers in the fifties,
but they are probably now too sophisticated to buy it.

    I. Other Comments: A strategy which only considers the action and
threat part of the modified Aron deterrent on page 284.

10. Limited Strategic Retaliation

   A. Introductory Comments: As mentioned a number of times in the
text, this theme can be combined with almost every other theme on the list.
Thus there are, in effect, about a dozen varieties of LSR. We will con-
sider here the one which has been considered most in the literature.

   We start by assuming a very firm balance of terror amounting to a
Mutual Homicide Pact, if there is, at any point, a spasm countervalue
exchange. The theorists then argued the use of Limited Strategic Retal-
iation as a substitute for the threat or waging of war in the prenuclear
era. (There has been extreme interest in LSR by theoretical people be-
cause it does pose fascinating analytic-type questions. There has been
almost no interest among practical people or decision-makers because the
whole concept has struck them as too bizarre to be considered.) In par-
ticular a most extreme form of LSR--city trading--has been most usually
exposited. However, there are many other ways one can use nuclear weapons
to harm, punish or fine an opponent than destroying his cities. But city
trading should not be dismissed as inconceivable. It is interesting to
note that when authors write fictional accounts of an accidental or un-
authorized war such as in Red Alert or Fail-Safe they eventually tend to
invent something like a city-trading LSR as an important part of the
story. If these novelists have a sound instinct, it seems likely that
the judgment of the analyst has been correct and the instinct of the
decision-maker in rejecting this judgment as too bizarre for consider-
ation is probably wrong. One mistake, however, which analysts tended to
make in this strategy is to think of it as being repeated time after time.
Most likely one or two repetitions would result in a very big change in
the conditions underlying the international system or the LSR itself
might be converted into a kind of potlatch war.

   B. Sub-Themes:

      LSR-1. Szilard's Pricing Concept: Some years ago Leo Szilard
              suggested that both the United States and the Soviet
              Union publish a price list of the various things that
              they valued in terms of their cities. The idea was
              that the highest bidder would then take the thing that
              he wants while the other side would then go ahead and
              destroy the "winner's" city, thereby collecting a price
              for the bidder's "victory." This is probably the most
              bizarre of all the suggestions that have been made, but
              bizarre as it is it is not completely outrageous.
              Things like this may yet happen.

      LSR-2. Kaplan's Bargaining Form: A much more plausible form
              of Limited Strategic Retaliation which has the purpose
              of fighting a bargaining war (of attrition?) in which
              the resolve and committal of each side is matched
              against the other's. This suggestion came from Morton

Kaplan and has been discussed by many others, partic-
ularly Burns, Kahn, and Schelling. Some of the basic
ideas behind these notions have been discussed in Chap-
ter VI, pages 132 to 137, in the discussion of Bargaining
in a Balance of Terror and in Chapter XI, pages 304 to
306, in the discussion of the middle rungs of the ladder.

LSR-3. **Deterrence by Announcement**: In 1960, after the U-2 had
been shot down, Khrushchev announced that he had given
Malinowski standing orders to bomb any base from which
a U-2 took off to fly over the Soviet Union without
checking again with Khrushchev. If Khrushchev really
expects to carry through this policy and his deterrence
fails, then he is doing something between Szilard's
price collecting and Kaplan's bargaining, depending,
among other things, on what he expects to happen and
what in fact will happen. In any case, it was not a
completely unpersuasive threat.

LSR-4. **Muddling Through or Warning**: One thing on which every-
body is clear is that it is somehow dangerous to antag-
onize or provoke a possessor of nuclear weapons even
if he only has a primitive delivery system. Now it is
true that most people have a notion that the action
policy on which the deterrence rests will correspond
more to the NMR strategy to be discussed (that is, the
possessor may spasm if provoked); but more likely the
possessor of nuclear weapons if he uses them at all will
discover at the last moment (as the novelists did) some
version of LSR and use it. And one can really think of
this recognized situation as a generalized warning which
everybody is, in fact, aware of.

C. **National Goals**: The belief that it is necessary to have some
method of regulating provocations in a disorderly world and that the
classical method of going to some kind of large scale or all-out war is
no longer acceptable particularly to the West (actually the editor would
hold that LSR is probably easier for totalitarian nations than for democ-
racies). Proponents of LSR would like the government to make some sort
of declaratory announcement to educate the people, decision-makers,
allies, and possible opponents in the intricacies and logic of this stra-
tegy. If this is done and this strategy is made a mainstay of policy, we
will call it an LSR strategy (though it clearly has to be combined with
some other ACWS posture as we have already stated). In actual practice
LSR as a declaratory, contingency, or action policy is likely to work
best if the side using it has some kind of superiority, particularly
some degree of credible first-strike capability. It can have this capa-
bility and still not be willing to risk its fate on the superiority
actually working and therefore might have to retreat to a temporizing
measure, i.e., LSR. Because of the escalation dominance that arises from
superiority LSR bargaining is much more likely to work. Indeed, any

particular incident is likely to be terminated after a very small number
or even no exchanges, i.e., the single act of the superior power being
sufficient to quell the inferior power which fears eruption by the
superior power if the conflict is prolonged.

D. Political-Military Analysis: There has been a good deal written
about this strategy. For a general discussion of this subject we would
refer the reader to a collection of articles on Limiting Strategic War
edited by Klauss Knorr and Thornton Reed.[2] The basic assumption of course
is that fear of an eruption can be so great as to force even emotional
decision-makers into making careful calculations or at least into action
policies that are not wildly unreasonable or irrational. For the possi-
bility of this happening we refer the reader again to Chapter VI, pages
132 to 139, for an illustrative discussion. Another important political-
military assumption is that one really needs a higher degree of credibil-
ity than can likely be achieved in such strategies as NCF in order to
regulate the behavior of opponents.

E. Central War Purposes: Can pay attention to all of them or re-
strict itself to Type I and Graduated Deterrence.

F. Typical Capabilities: One has to have a relatively flexible sys-
tem of missiles or planes with which one can, in fact, measure out a very
graduated or measured punishment in some reasonably reliable fashion. This
may require all kinds of flexibility and reliable systems but the extra
requirements will probably be only a small addition to the main systems,
i.e., to the posture of the ACWS to which the LSR theme has been married.
It is also very important to be able to understand one's opponents so that
one can in fact estimate the degree of punishment that he might feel. One
does not wish accidentally to destroy a treasured shrine and thus create
a completely inordinate reaction compared to the one that was expected.

G. Likely Tactics: The use of exemplary attacks or other symbolic
attacks for deterrence, fining, bargaining, and other such purposes.

H. Level Seven Considerations: It seems quite clear that the bal-
ance of terror will have to be more firmly understood by the population
and decision-makers before a strategy such as LSR could be acceptable as a
declaratory policy (even though Khrushchev has used it once). But it also
seems clear that such a strategy is likely to be invented in desperate cir-
cumstances just as the novelists did (or perhaps as Khrushchev did). There-
fore LSR can in fact be a concealed or unrealized contingent or action
policy. However we would then call it a sub-theme rather than a major
theme, since LSR is, in this sense, implicit in all of the strategies.

I. Other Comments: We do however expect more discussion of this pos-
sibility as the balance of terror seems to grow firmer and people get more
used to its consequences.

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[2]Praeger, New York, 1962.

11. Not Incredible Counterforce First Strike

A. Introductory Comments: A major assumption is that the threat
of countervalue retaliation may be insufficient to deter Soviet attack
on the U.S. in extreme crises and definitely loses credibility for lesser
provocations such as attack on Europe. While complete disarming-strike
capability may be very difficult to achieve, or maintain, in most cir-
cumstances the U.S. will have a capability for significant force-reduc-
tion attacks. The further assumption is made that the Soviets are not
likely to react in a wildly irrational fashion to controlled war tactics.
When presented with a carefully limited counterforce strike and a black-
mail threat to increase the damage if they retaliate countervalue, or
with a partially disarming strike that tips the military balance against
them and destroys their chance of winning, they will tend to prefer to
negotiate terms rather than continue the war. Since this is a near-
rational strategy, the threat to react in this way to a major provocation
is credible and can be used to deter extreme provocations in appropriate
contexts. If either Type I or Type II Deterrence should fail under ex-
treme stress, this strategy prepares to terminate the war on a relatively
satisfactory basis.

This position is often based on the assumptions of DI and EI with
one possible addition:

Decision-makers are not likely to be wildly irrational: Even in an
unfamiliar world of "unused" nuclear weapons and possibly even after
their large-scale use, humanity and, more important, decision-makers will
continue to function to some degree on the basis of understanding cause
and effect, stimulus and response, etc. In a sense, we are not dealing
with a new reality, only new strength; the fundamental principles of war-
fare and negotiation will still obtain particularly since everybody is
afraid of the possibility of a total holocaust. With current fears the
start of World War III is more likely to partake of the caution and un-
disputed sophistication of the early months of World War II, than the
recklessness and simplicity of World War I.

B. Sub-Themes: All of the DI sub-themes that apply when we have
been struck are applicable here, but as with EI there is a tendency to
favor the more ambitious objectives if deterrence fails. In addition,
there are various sub-themes which apply in the case where we strike
first as follows:

1. Some proponents are really advocates of Strategy as Currency
in that they do not take seriously the U.S. First Strike Threats; they
either do not believe that we would ever be called to deliver or do not
intend to live up to the declaratory policy if we are called.

2. Others would combine NCF with LSR, using the escalation
dominance characteristics of NCF to make LSR more effective.

3. Still others would extend the NCF to a very large range of
contingencies including even relatively small conventional attacks in

6. <u>Arms Race Deceleration</u>: Not a primary aim, but a major consideration.

7. <u>Specific Arms Control Measures</u>: None called for.

8. <u>Capability Against Unorthodox Opponents</u>: This capability is automatically included tc a higher degree than in most other strategies.

9. <u>Political Acceptability</u>: This strategy might raise some controversies, about being too aggressive or technically unfeasible. The first question will presumably be answered by the statement, "Not so. The Strategy is actually prudential." And this answer can probably be made very persuasive.

As for the feasibility it may well be that as long as we maintain or try to restore this capability, the Soviet force structure would also change in ways that make the strategy less effective. And, the arms race may then be accelerated, defeating another of our objectives. But neither of these possibilities is certain. Rather the opposite. One can make some very persuasive counter-arguments that Soviet reaction will be limited enough to permit feasibility at "classical" costs.

E. <u>Central War Purposes</u>: All are considered important and are included with varying emphases in the range of options of this strategy.

F. <u>Typical Capabilities</u>:

1. <u>Offensive Weapons--Numbers, Kind, Basing</u>: A force capable of attacking in such a manner as to tip the military balance against the Soviet Union on either a first (and perhaps second) strike hardened so as to make an equivalent Soviet attempt futile. Excellent retargeting capability and complete selectivity of response.

2. <u>Active and Passive Defense</u>: Active defense of reasonable quality at least against bombers would be necessary; Passive Defense to a moderate degree but one which includes preattack mobilization capabilities for use in a crises (for example, evacuation or dispersal).

3. <u>Command and Control</u>: Excellent command and control, with the capability to hold response, to survive, to gather and process information rapidly about the military status of both sides during hostilities, to communicate with the enemy, and to convey orders to our own forces, including allies, during hostilities.

4. <u>Intelligence</u>: Of paramount importance to allow for the counterforce targeting and proper conduct of strategy throughout exchanges. (See discussion of War Termination in Chapters XI and XII.)

5. <u>Operational Capabilities of all These</u>: All must be of a high quality to allow for fighting in a controlled manner.

6. <u>Tactical and Strategic Skills</u>: The use of a mixture of
exemplary attacks, limited countervalue strikes, and constrained or un-
modified disarming attacks, plus blackmail, will require sophistication
at all levels.

G. <u>Likely Tactics</u>: As a declaratory policy, threaten appropriate
type of counterattack and reprisal if U.S. is struck. (This could be
announced as likely to be a reprisal, a counterattack, or a retaliation,
depending on the character of the first strike--and on one's second-
strike war-controlling capability.) In addition, attempt to restrain
Soviet behavior by at least creating and exploiting some <u>uncertainty</u> as
to U.S. intentions; take measures to support appearance that a U.S. first
strike might not be "wildly irrational" given certain provocations.
Promise capability and possibility of "prudential" controlled war-fight-
ing but with absence of assurance that U.S. will not launch first strike,
or, possibly a declaratory policy that U.S. <u>may</u>, under "sufficient" but,
not necessarily, specified provocation launch a counterforce attack.

<u>Limited</u> efforts to improve first-strike (as distinct from second-
strike) capability to limit damage and improve military outcome (as
opposed to "stabilizing" policies which would lessen first-strike capa-
bility); plan for and announce first-strike concept of strict military
targeting coupled with threat-strategies. Finally as an action policy,
launch a disarming attack or use LSR, if extremely provoked.

H. <u>Level Seven Considerations</u>: Prudential enough to be acceptable
to U.S. and allied publics and decision-makers.

I. <u>Other Comments</u>: This is the "classical" U.S. posture position
which we are now rapidly losing. This loss may not be important in a
Beta world, though it could be catastrophic in some worlds. In fact, we
are likely to keep some degree of NCF as a hedge against future Nth
countries--perhaps combined with DI or MFD versus the Soviet Union.

12. Contingent Preventive War

A. Description and Assumptions: This strategy tends to be some-
where between NCF and Credible First Strike but with an emphasis on warn-
ing rather than threat (see note on page 283). It includes the threat
of a "calculated" preventive war to regulate or limit Soviet behavior.
In the event of extremely provocative and/or damaging behavior on the
part of the Soviet Union, proponents of this strategy would project
future Soviet actions and calculate the losses involved in accepting the
results, compared with the probable losses from an appropriate disarming
attack accompanied by a peace offer. The essence of this strategy is
that this calculation is to be done as coolly and rationally as possible--
i.e., by a computer if possible. Emotional slogans designed to enhance
alliance solidarity are to be ignored.

B. Sub-Themes: The major variations would implement various theories
of how to calculate the national interest, the likely utility of the out-
come of the war, and the level at which the "trigger" should be set.

C. National Goals: There are conceivable alternatives worse than
a thermonuclear war--for instance, a more destructive war which could re-
sult from waiting too long. Thus, it is possible that circumstances could
arise in which a prudent decision-maker with reasonable values could cor-
rectly judge that the uncertainties and disasters were at least as fright-
ening and difficult to calculate on the non-war side as on the war side.
Opponents will usually argue that one should never risk a war on calcu-
lations which may be based on an error or a misunderstanding. They can-
not conceive of a circumstance in which the non-war alternative would
not be preferable--in which the calculation that peace (i.e., appeasement
or accommodation) so preferable itself is based on an error or misunder-
standing. This posture might easily give the appearance of preparing
for Aggressive War or require a high degree of mobilization and thus be
disruptive to the achievement of other national goals.

D. Military Political Analysis: Such a strategy is assumed by its
advocates to contribute to the achievement of most of the listed goals
with the possible exception of arms control and arms race deceleration.
These might be felt to be of secondary importance. The Political Accept-
ability of such a strategy if taken seriously, might be exceedingly diffi-
cult to assume, but political costs might be considered less important
than the other goals which are met. However as indicated by the quotes
on pages 251 and 252, Kennedy and McNamara sometimes use the declaratory
policy of this strategy vis a vis the contingency of the Soviet's attack-
ing Europe.

E. Central War Purposes: Includes all purposes with possible ex-
ception of Threaten Inadvertent War.

F. Typical Capabilities: Somewhere between CFS and NCF.

G. <u>Likely Tactics</u>: Announced existence of Preventive War Potential
capability. Use credible threat of such Preventive War to regular or
limit Soviet behavior. War-fighting tactics to be determined by how war
starts and by objectives, but there will be no punishment of enemy for
revenge or other malevolent or emotional reasons.

H. <u>Level Seven Considerations</u>: This is a very acceptable declara-
tory policy to an alliance, but by and large it is likely to be difficult
to hold to it in cold blood or to keep it credible. As an national policy
it tends to express miscalculations (i.e., it is more SC than CPW) which
if believed could be dangerous.

I. <u>Other Comments</u>: This strategy has a very bad name largely be-
cause many believe that anybody who decides that a Preventive War is the
least undesirable alternative available, is miscalculating and is probably
really in favor of Aggressive War, or has an unwarranted faith in his cal-
culations. However, these charges may be unfair since it seems possible
that circumstances could arise in which a prudent decision-maker with
reasonable values could correctly judge that, "the uncertainties and
potential disasters are just as frightening and difficult to calculate
on the peace side as on the war side."

One major value in having this package is because so many people
claim it is both our actual policy and a credible defense of Europe.

13. Credible First Strike

A. <u>Introductory Comments</u>: High level of Type II Deterrence achieved
by combination of an effective disarming ability with a great deal of re-
solution.   Proponents believe it is possible to procure and maintain
forces capable of reducing enemy forces to a level at which they can no
longer deliver grossly unacceptable damage to the U.S. Assuming this,
the threat of such a strike in response to a large range of major provo-
cations (such as major attacks on Europe or other U.S. interests)should
be credible. The strategy attempts to achieve a high level of Type II
Deterrence by using a combination of effective disarming attacks, active
and passive defense, and a great deal of resolution.

B. <u>Sub-Themes</u>:

CFS-1. <u>Resolution is the Answer</u>. Let us procure reasonably
adequate war capable forces without worrying too much
about cost, arms race, and enemy countermeasures and
then let us make up our minds that "appeasement does
not pay."

CFS-2. <u>Technology is the Answer</u>. We can use this new technology
both offensively and defensively. Stress should be put
on developing new weapons with unique capabilities and
pursuing research and development to the point of new
breakthroughs. If we work hard enough we are bound to
succeed.

CFS-3. <u>We Cannot Fail</u>: A combination of CFS-1 and CFS-2 that
does not admit of the possibility of failure.

CFS-4. <u>We Must Try</u>. A combination of CFS-1 and CFS-2 that
admits of the possibility of failure, but insists on
making the attempt to achieve the objectives and capa-
bilities of CFS.

C. <u>National Goals</u>: To be able to make and live up to commitments.
To preserve honor and prestige even at great cost. To prevent or destroy
"Hitlers" early in their development.

D. <u>Military-Political Analysis</u>: The major assumptions are that:
It is possible to procure and maintain a posture which has the capability
to reduce enemy forces to a level at which they can no longer inflict
unacceptable damage on the U.S.A. In any case the threat of such a strike
is credible, and can be used to deter major provocations. It could be
argued also that such a strategy would heighten fear, stimulate arms
races, and upset stability even if the technical aspects alone did not
preclude it from practical realization. In the worst case one would have
neither eaten his cake nor have had it--e.g., U.S.-B versus S.U.-C as
discussed on page 355.

E. <u>Central War Purposes</u>: Emphasizes all purposes except those that have to do with control of the arms race or keeping down costs.

F. <u>Typical Capabilities</u>: Aim at medium-to-high confidence capability to limit damage markedly (5-60 million U.S. casualties) and achieve military victory in a U.S. first strike despite <u>possibly determined</u> efforts by Soviets to counter these objectives; this may imply a much larger effort and military budget than required, for "controlled war-fighting capability" for strategic deterrence alone;

Increase all forces required for controlled war-fighting to levels required for above objectives;

Major civil defense program including large fallout shelter program, blast shelters, stockpiling, evacuation capability;

Add vulnerable and slow-reacting offensive forces (especially if significantly cheaper; but even if not, to strengthen credibility);

Major effort to achieve ABM capability;

Add major active defenses, including ground and satellite ABM's to extent feasible or practical;

Plan and announce concept of strict military targeting combined with evacuation and threat-strategies;

Mitigate undesirable effects (e.g., by increasing invulnerable retaliatory forces) upon deterrence, stability, and arms race so far as possible, but accept such costs as are unavoidable to assure necessary degree of rationality of first strike calculations.

G. <u>Likely Tactics</u>: As indicated in F. However might use LSR as an action policy if Type II or Type III deterrence failed and there was some lack of faith in capabilities during the moment of truth, thus depending on the escalation dominance generated by the posture to make the LSR come out right.

H. <u>Level Seven Considerations</u>: While urged by some Air Force officers, short of a Delta or Epsilon world, the strategy seems very uncongenial to the U.S. public and their decision-makers though we probably have the resources to make it feasible in most circumstances.

I. <u>Other Comments</u>: No longer a real contender except for declaratory policies, oratory, or against Nth countries.

14.   <u>Not Incredible Massive Retaliation (NMR)</u>

<u>Summary Discussion</u>: In the same way that the Mostly Finite Deter-
rence is a compromise version of FD and D1, which eliminates many of the
more violent objections to FD, so NMR is a compromise version between
PMR and NCF. The most important compromise is to add enough war-capable
forces so as to have at least the appearance of control and the possibil-
ity of survival, to prevent the resolution of a decision-maker from being
shaken by unchallengeable predictions of the absolute inevitability of
everyone's being killed by the counterretaliation. Though the result of
using the NMR strategy <u>might</u> be mutual homicide, this possibility is not
so obvious as to decrease its credibility to the vanishing point. In
addition, the NMR strategy requires some capabilities in the non-central-
war area, so that it threatens Massive Retaliation only for extreme prov-
ocations rather than for any serious provocation. In all other respects
the NMR strategy is a mixture of PMR plus a facade of Improved War Outcome.

As with LSR, but less persuasively, NMR can be mixed with about all
the other ACWS themes. While such a mixture would back up--in some ways--
some of the major purposes and inadequacies of these themes, it is not
likely to be an explicit declaratory policy in most of the strategies.
However, decision-makers must never forget, that despite all their calcu-
lations and against all reason NMR may turn out to be an action policy.
This is, of course, the basis of the policy.

The major assumption is that even a small probability that an all-
out countervalue attack may be forthcoming will be sufficient to deter
not only strategic nuclear attacks on the U.S., but actions short of this
to which the United States has announced it may respond in that manner or
at least to which it has made the question ambiguous. A possible addi-
tional assumption is that an enemy's belief that we might make such a
response to a major provocation, nuclear or nonnuclear, can be reinforced
if we commit our honor sufficiently and provide ourselves few or no visi-
ble strategic alternatives or satisfactory tactical alternatives (for
limited wars).

15. Pure Massive Retaliation

   A. Introductory Comments: A Deterrence Only strategy that tries
to achieve Type II Deterrence with resolve and committal alone. A common
position in the U.S. among some older officers and many others. The con-
cept originated early in the era of thermonuclear strategy, in a period
when nuclear counterretaliation did not have to be feared. It rested on
being openly committed to responding massively to any serious provocation
against the U.S., Europe, and/or other important interests. Type II
Deterrence was achieved partly by sheer resolve, partly by deliberate
uncertainty about what constitutes a serious provocation and the exact
nature of the massive retaliation ("times and places of our own choosing").

   This approach could be a "softened" version of Contingent Homicide,
plus the desire to use the threat of eruption to discourage all kinds of
Soviet attempts to gain political advantage.

   B. Sub-Themes: Degree of automaticity of "go ahead" signal, areas
covered by the guarantee, explicitness of guarantee, etc. can all be
varied.

   C. National Goals: Similar to CFS except that there is no hedging
if deterrence fails.

   D. Military-Political Analysis: Assurance (through ignorance and
internal deception), Escalation Dominance, and Alliance Cohesion, Capa-
bility Against Unorthodox Opponents are the main objectives. (The last
is achieved by being oneself equally or more unorthodox.) But eventually,
as with the other "large" deterrent postures, even those objectives which
are assumed to be enhanced may run the risk of failure. Yet PMR was work-
able when based on a nuclear monopoly, but it is not stable against shocks
nor credible for Type II Deterrence when there are competent nuclear
opponents. Arms Race Deceleration and Political Acceptability are not
considered and from both these points of view the strategy is probably a
failure. However, if deterrence actually fails the strategy might re-
treat to an LSR action policy.

   E. Central War Purposes: Deterrence (both Type I and II) is again
primary with the threat of first strike if sufficiently provoked (the
definition of "sufficient" is intentionally fuzzy). The ability to
threaten inadvertent eruption is intended to achieve some of the politi-
cal advantages which might be afforded by other, more complex, strategies.
The other purposes are not primary.

   F. Typical Capabilities: Force large enough to do major damage to
the Soviet Union on a first strike (hedged against a disarming strike by
hardening and large size in relation to enemy capability), no particular
command and control beyond "go" signal; pretargeted to countervalue tar-
gets, all or nothing, go no-go weapons release, no active or passive

defense, but could have some small (hidden?) back-up LSR capability or
unwittingly be able to improvise such a capability.

   G.   Likely Tactics: Threaten massive countervalue first strike if
sufficiently provoked (leaving definition of "sufficient" slightly fuzzy).
Threaten massive countervalue retaliation if U.S. were to be struck.
Respond in this manner if U.S. is struck or if Russia begins a major war
in Europe or in some other vital part of the world (or use back up LSR
capability).

   H.   Level Seven Considerations: The connotation of rigidity and
fanaticism, the seeming disportion of life and distance between provo-
cation and response, and the seeming disregard for human life all combine
to make PMR fit badly as an action policy. (See discussions in Chapter
7, 10, and 11.)

   I.   Other Comments: This is one of the strategies that is based on
a pure Rationality-of-Irrationality tactic and calculation. While it
might be irrational to respond in an uncontrolled fashion to a serious
nuclear provocation by the Soviet Union, it may well be entirely rational
to make the enemy believe that we have in fact committed ourselves to such
an irrational strategy. As always, extreme Rationality of Irrationality
strategies may turn out in practice to be pre-emptive or preventive
accommodation as an action policy.

APPENDIX III

SOME EARLY-MID SEVENTY WORLD FUTURES

In Chapter V (pages 96-104) we described an abstract, analytic, and morphological approach[1] to generating AWF's (Alternative World Futures) and also outlined briefly (pages 89-90) five AWF's which had been obtained via an intuitive, empirical, extrapolative, and morphological approach. For convenient reference these last worlds are set forth in this appendix by both methods. Let us start with Alpha-1 (Mostly Peaceful and Prosperous) and fill out the table set forth on page 97 using the notation described on page 98. For most of the entries we will take 1963 as a base for comparison. (It might be an interesting exercise for the reader to skip Table I, read the description of the Alpha-1 world, and then try to fill in the table on page 97 before reading Table I.)

TABLE I

ALPHA-1   Mostly Peaceful and Prosperous

		Symbols	Notes
1.	Multipolarity	++	
	a. Nuclear	+	
	b. Political-Military	++	
2.	Major Realignments	+/- to -	
3.	Political-Economic Success Non-Industrialized Areas	+	
4.	Powers of International Organizations	+/- to +	
5.	Arms Limitations	+	Mostly tacit
6.	War-Dangerous Confrontations	-	
7.	War-Dangerous Non-Confrontations	-	
8.	Minor Nuclear Diffusion	+/-	
9.	Credibility of Nuclear Use	-	
10.	Military-Econimic Strength of U.S. Relative to World	+/- to -	
11.	Military-Economic Strength of U.S. and "Firm" Allies Relative to World	+ to +/-	
12.	U.S. Internationalism	+/- to -	
13.	Internal Cohesion of States	+	
14.	Unity of Communist and NATO Blocs	- to --	
15.	Aggressiveness of Blocs (or their members)	-	
16.	Ideological and Cultural Successes of Blocs	0	
17.	Special Dangers and Opportunities		Assuming continued peace without effort.

[1]See pages 82-83 for discussion of: extrapolative vs. syncretic, synthetic vs. morphological, and empirical, intuitive vs. abstract, analytic approaches.

A literary realization of this world might go as follows:

In the Alpha₁ Worlds most of the reasonable hopes of the postwar
era and current U.S. plans and programs have been realized. Afro-Asia
and Latin America make progress economically, politically, and socially;
the U.S.S.R. is increasingly prosperous and "reasonable"; America and
Western Europe enjoy stable economies and contribute extensively to
foreign aid. Even Communist China is less threatening. The major is-
sues dividing the world have either been resolved or allowed to atrophy.
The U.N. is strong and the habit of international conciliation of dif-
ferences is becoming ingrained. This is not a world in which United
States leadership is unquestioned or even very much needed. It is
therefore not a NATO world. NATO has tended to disintegrate in the
late 1960's and early 1970's.

Soviet Union

In the Alpha₁ World the Soviet Union is relatively prosperous, re-
laxed, and peaceful. There is still talk in the U.S.S.R. of liberation
wars and of the coming victory of world revolution, but the Communist
ideology has tended to degenerate into a kind of myth of society. The
Soviet Union no longer attempts to expand by the proxy war technique,
and its foreign aid efforts have not yielded any noticeable political
gains. The Soviet Union has found that the argument advanced by the
Chinese Communists in the mid-1960's was correct: "If you aid bourgeois
nationalist governments, you get bourgeois nationalist governments."
Nevertheless the Soviet Union consoles itself with its own rapidly ad-
vancing prosperity. National income in the U.S.S.R. is approximately
$2,000 per capita (total GNP is $500 billion), although this money is not
spent according to the Western pattern.[2] The Soviet Union's prosperity
is sufficient to give it a genuine stake in the international status quo
and the country as a whole is highly deterred.

This sense of relative calm extends to the European satellites as
well, where prosperity and timely Soviet concessions to national, polit-
ical, and cultural differences have combined to stabilize bloc relation-
ships. The satellites develop along "national roads" to Socialism, dif-
fering from the U.S.S.R. on such matters as agricultural (including col-
lectivization) policy, censorship, investment priorities, etc. But they
accept Soviet leadership in military and foreign affairs. Travel by trade
specialists, students, and university professors in Western Europe is com-
mon; trade with the E.P.C. is heavy and mutually beneficial. But the
satellites are more or less content to remain within the Soviet sphere.
The bloc as a political entity is rapidly evolving toward a form of in-
ternational Socialist "commonwealth."

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[2]As one Hudson Institute staff member put it, when they give you a
pat of butter it will be just as big and caloric as a Western pat, but
it will have a thumb print on it and will not taste as good.

The Soviet military establishment, however, remains large--partly
because of its concern with E.P.C.--but an East-West non-aggression pact
has been in effect for seven years. Military technology is advanced, but
the Soviet leadership contents itself with a de facto strategic parity
with the United States and Western Europe. The Soviets possess approxi-
mately 1,000 hardened ICBM's, each with a five- to ten-megaton warhead;
2,000 IRBM's with a similar warhead covering Japan, China, and Europe;
and a fleet of ten Polaris-type submarines, each with ten intermediate
range missiles.

Western Europe

A European Political Community is now in being. Europe, including
Britain, is highly prosperous and integrated. France dominates the inte-
grated community chiefly as the result of the élan and aggressiveness of
de Gaulle's foreign policy in the mid- and late 1960's. In some sense,
the role of France in the new European Political Community lies between
that of Piedmont-Savoy in the united Italy of the 19th century and that
of Prussia in Bismarck's united Germany. The European GNP has grown
rapidly at an average of $4\frac{1}{2}$-5 per cent yearly since the early 1960's: it
is now $500 billion yearly--equal to the Soviet GNP. This growth rate
applies to Britain as well, whose economy was stimulated by admission to
the bloc in the mid-1960's. There are, however, strong inflationary pres-
sures at work.

In this generally peaceful international climate, the French and
British independent deterrents have been merged within an independent
European nuclear force which is (loosely) coordinated with U.S. forces.
There are twenty nuclear ballistic submarines each equipped with 16 third-
generation Polaris missiles, plus about 25 ready divisions equipped to
fight with conventional and nuclear forces.

Communist China

Chinese aggressiveness is much reduced. The schism between Moscow
and Peking continues, but internal problems and the failure of its revo-
lutionary hopes abroad have tended to discourage China. There are even
incipient signs of declining morale. China no longer quite believes in
its future or that time is on its side. The "two-Chinas" solution for
Taiwan has been grudgingly accepted as the price of entry into the United
Nations. The general line of the Communist Party of China is thus in-
creasingly conservative, and at the local level there is a growth of in-
dividualism, corruption, and "privatism." The Chinese nuclear force has
not been much developed beyond the explosion of two inefficient nuclear
devices in the mid-1960's. Delivery capabilities are slight.

Japan

Leadership in East Asia has passed to Japan which has demonstrated extraordinary economic vigor. GNP, growing at an annual six per cent per capita, has passed $200 billion yearly and implies a per capita income of $2,000 per annum. There is corresponding vigor in the diplomatic-political field. The U.S.-Japanese treaty remains in force, but is not a major prop of Japanese security. Spurred on by the abortive Chinese attempt to construct a nuclear arsenal in the mid-1960's, the Japanese develop their own one-half megaton warhead, and while these have not been tested, they have been assured by the U.S. that they will work. Alpha-1 Japan would be the third largest economic power in the world, after the United States and the U.S.S.R., but holds fourth place after the _integrated_ European Economic Community. There are few signs of the old Japanese aggressiveness. Japan, on the contrary, has taken the lead in concluding a series of defensive collective security agreements with its East and South Asian neighbors, particularly South Korea, India, the Philippines, Indonesia, and Thailand, to contain Chinese aggressiveness.

India

Nehru's successors in the Congress Party and government are relatively young men, in their forties and fifties, who feel no strong antipathy to the old Western colonial powers. Instead, they have charted a moderately successful independent course for India and stayed clear of formal treaty ties with either the U.S. or the U.S.S.R. They enjoy the benefits of massive economic aid from both, as well as Soviet-American informal guarantees against renewed Chinese Communist aggression. While Indian economic growth is not spectacular, it is pulling ahead of population growth. The Indian example therefore compares favorably with China and fears abroad that Afro-Asia may follow the Chinese road are radically reduced. India also cooperates closely with Japan to maintain the security of Southeast Asia.

Other Underdeveloped Areas

Generally speaking, these areas have settled down to a sober, long-term development effort. They are making modest, steady progress, though their hopes are somewhat dampened by the realization that real prosperity for Africa, and the more backward parts of Asia, lies far in the future. Their economic growth, however, has been helped by foreign aid from the European Economic Community and Japan, as well as the United States. The volume of Soviet aid has tended to decline since the late 1960's when the Soviets found that their political ambitions were not significantly advanced by their foreign aid program. In most of the underdeveloped regions, the former European colonial powers feel some responsibility for economic development and international security. The English presence is felt once more in the Middle East and East Africa, and the French in Equatorial Africa and the Maghreb (Algeria, Morocco, Tunisia). There is, thus, a strong European presence in those areas of the world which, in the

early 1960's, depended chiefly on the United States for security and economic assistance. This has not altogether turned out to be a bad thing. The Europeans are less sentimental than the Americans in the giving and withholding of aid, but they are not colonialists of the prewar model either. Many of their foreign representatives in these regions speak the local languages and understand the local cultures; and this respect is reciprocated by the former colonials who have regained some of their admiration for European culture as well as technology.

Strategic Doctrine

As a first step towards possible arms control agreements, the United States, Soviet Union, Western Europe, and Japan have announced a "no cities" nuclear doctrine, established "hot" lines to a U.N. central, banned testing in the atmosphere, agreed to inspection teams to guard against surprise attack, and are still negotiating about more basic matters. While there is in some quarters considerable concern about the arms race, apathy and wide-spread doubts about the likelihood of nuclear war have removed much of the pressure for wider arms control measures.

Military Implications for the United States

This is not a world which needs NATO. Since the U.S. GNP is $800 billion per annum (implying a growth rate of 3 per cent yearly), the United States armed forces subsist on a total budget of $20-25 billion per annum, (or 3 per cent of the GNP) with approximately $5 billion per year spent on military research and development and an additional $5 billion on space research. Small as these figures are by early 1963 standards, there are increasing complaints heard in Congress. The United States maintains a force of ten divisions, none of them stationed in Europe; tactical air has also been cut, but strategic airlift has been maintained. Strategic forces consist of about 20 (15-plane) wings of (now ancient) B-52 G's and H's, 1,000 "D" and "E" model Minutemen and 50 retrofitted Polaris submarines with "A$_4$" and "A$_5$" missiles. This strategic force costs about $5 billion yearly to operate, including the replacement of necessary missiles. (See U.S.-A posture described on pages 26 to 28.)

For convenient reference we also include a truncated table setting forth the Alpha-2 and Alpha-3 worlds briefly referred to on page 271. The variables that are omitted are either irrelevant or much the same as in Alpha-1.

TABLE II

ALPHA-2 Peaceful and Prosperous with Internationalist Emphasis

		Symbols	Notes
4.	Powers of International Organizations	+ to ++	
5.	Arms Limitations	+ to ++	
12.	U.S. Internationalism	+ to ++	
17.	Special Dangers and Opportunities		Further development of world under law

TABLE III

ALPHA-3 Peaceful and Prosperous with War Considered Unthinkable
(Gallois-Millis-Khrushchev-Other Non-War World)

		Symbols	Notes
1.	Multipolarity		
	a. Nuclear	+ to ++	
	b. Political-Military	+ to ++	
6.	War-Dangerous Confrontations	--	
8.	Minor Nuclear Diffusion	+ to +++	
9.	Credibility of Nuclear Use	+ to +++	In defense only
10.	Military-Economic Strength of U.S. Relative to World		
	a. Nuclear Forces	+/- to -	
	b. Conventional Forces	+/- to -	
	c. Military-Economic Potential	+/- to -	
11.	Military-Economic Strength of U.S. Allies Relative to World		
	a. Nuclear Forces	+ to ++	
	b. Conventional Forces	+/- to ++	
	c. Military-Economic Potential	+ to ++	
17.	Special Dangers and Opportunities		War has been effectively outlawed by nuclear weapons

We give now a truncated table of variables for the Beta-1 world
(Many Intra- and International Stresses).

TABLE IV

BETA-1   Many Intra- and International Stresses (Some Degree of Detente)

		Symbols	Notes
1.	Multipolarity		
	a. Nuclear	+/- to +	
	b. Political-Economic	+	
3.	Political-Economic Success Non-Industrialized Areas	+ to -	
7.	War-Dangerous Non-Confrontations	+/-	
9.	Credibility of Nuclear Use	-	
10.	Military-Economic Strength of U.S. Relative to World		
	a. Nuclear Forces	+/-	
	b. Conventional Forces	-	
	c. Military-Economic Potential	+/-	
11.	Military Economic Potential of U.S. "Firm" Allies Relative to World		
	a. Nuclear Forces	+	
	b. Conventional Forces	+/-	
	c. Military-Economic Potential	+	
14.	Unity of Blocs		
	a. Communits	-	
	b. U.S. and Allies	-	
	c. Third Bloc (or Blocs)	+	Relative to 1963
15.	Aggressiveness of Blocs (or their members)		
	a. Communist	+ to -	
	b. U.S. and Allies	+ to -	
	c. Third Bloc (or Blocs)	+ to -	

A literary realization of this world might go as follows:

Beta-1 Worlds are Alpha Worlds which have not quite come off: the
probability of war between the U.S. and U.S.S.R. is low and the state of
the world is less threatening than many possible futures foreseen in the
early 1960's. But the Beta-1 World, though generally peaceful, is never-
theless subject to many structural strains and stresses. There is little

overt violence, but much international anxiety. The grander hopes of the
early 1960's--for a prosperous, integrated Atlantic Community or, at the
least, a European Political Community, effective arms controls, and the
beginnings of sustained economic growth in the underdeveloped countries--
are more or less blighted.

The old world-wide balance of forces between the U.S. and the U.S.S.R.
has broken.down and no new balance has emerged to take its place. (See
Gamma₁ World for details on one possible form of the new balance.) While
superficially peaceful and safe, nuclear weapons are slowly proliferating
in this world and there are possibilities of new totalitarianisms and of
semi-hysterical hyper-nationalist and pan-racist movements arising in
Afro-Asia and Latin America to use them. The longer-range future is there-
fore not wholly bright merely because the Cold War has waned.

Soviet Union

The erosion of the Communist bloc--a process that began in 1948 with
Tito's defection and accelerated after Stalin's death in 1953--has con-
tinued: China, North Korea, North Vietnam, and Albania are open schis-
matics; within the bloc, the Soviets have great difficulty containing
deviationist movements. The Soviet Union has all but lost control of the
international Communist movement. The foreign parties no longer believe
that the U.S.S.R.'s chief concern is with world revolution--their victory--
and begin to take revolutionary action on their own. Now--although the
Soviet Union itself is relatively rich and deterred--trouble proliferates
in the areas of Asia, Africa, and Latin America accessible to Communist
influence.

Within the U.S.S.R. itself there is much inconsistency. The regime
has not found it possible to reverse the general trend to intellectual
experimentation without resorting to the kind of repression and terror
which atrophied after Stalin's death. Poets continue to speak out, if
only in small discussion and reading groups, and painters experiment with
abstract art. The youth are increasingly bored with Communist theory,
although most sections of society accept the Revolution and express some
pride in the U.S.S.R.'s economic and military strength, as well as in
Soviet space successes. But the regime cannot easily reconcile itself to
these changes. For example, it does not jail modernist painters; but it
often denounces them. Its policy against modern art is therefore
ineffective: it does not stop the painters from painting as they like,
but the ill-considered Philistinism of the regime earns their anger and
at times even their contempt.

Most educated Russians are increasingly curious about the West,
especially Western Europe. There are strong pressures for greater free-
dom of travel abroad.

In spite of these factors the U.S.S.R. remains a powerful and gener-
ally cohesive society; the really great strains are in its imperial rela-
tionships with China and the European satellites which are increasingly
impatient with Soviet restraints on their freedom. Efforts to construct

a "Socialist commonwealth" (See Alpha₁ World) have not succeeded. The
populations in the satellites are "unreconstructed" and contemptuous of
the Soviet "barbarians" who, though they have great military power, are
seen as inferior to Poles, Hungarians, Romanians, Czechs, even Bulgars
in general culture.

The Soviet military establishment is larger than in the Alpha-1 World.
While Soviet strategic forces for possible use against the United States
and Western Europe are much the same as in the preceding world, the
U.S.S.R. has not phased out its medium and long-range bomber force, or
much reduced its conventional ground forces below mid-1960 levels.
The reason for this Soviet military conservatism is not so much a belief
in the utility of these forces against the West as their potential utility
in a confrontation with Communist China. Second-line Soviet equipment
tends to be deployed along the Sino-Soviet frontiers.

Communist China

Relations between Moscow and Peking are strained, and sometimes ex-
ceedingly tense. Party relations have been severed; ambassadors have been
recalled "for extensive consultations." Peking competes vigorously for
the allegiance of foreign Communist Parties. China is poor, but its agri-
culture (with some concessions to the peasants) is in somewhat better
shape than expected by most Western analysts in the early 1960's. There
is no serious political opposition on the mainland to the Communists.
The Taiwan issue has more or less lapsed: the Communists do not plan to
invade the island and the Nationalists are content with their restricted
holdings. Nationalist China is still in the U.N. while Peking is excluded:
no one takes the Nationalists seriously, but the Communists have lost the
support of their former chief advocates--the U.S.S.R. and India.

Asia has been impressed by a rudimentary Chinese nuclear force of
converted civilian airliners carrying fission bombs of unknown yield.
This nuclear threat provides the background for Peking's diplomacy--the
objectives of which seem to be a "Socialist" version of wartime Japan's
"Asian Co-Prosperity Sphere."

Europe

De Gaulle at the age of 75 decided to seek a second seven-year term
in 1965 and succeeded in living out his term as a vigorous exponent of
the grandeur of France. The United Kingdom is still excluded from the
Common Market.' Upon the passing of Adenauer, a period of indecisive
government began in Bonn. Franz Strauss is still a major power in German
politics and seems to favor a demagogic political platform, including
"liberation" (tactics unspecified) for the (now 20 million) Germans in the
Soviet zone. The Common Market meanwhile pursues a moderately anti-Ameri-
can trade policy, not only within Europe, but in competition with the U.S.
in Afro-Asia and Latin America. European gold reserves rise. France is
especially prosperous, but her political leadership is more and more chal-
lenged by Germany where men who were youths under 18 in 1939 are beginning

to take over the leadership of business and governmental affairs. They
feel little sense of guilt for the crimes of the Nazis and are deter-
mined to re-establish Germany's rights in the European community and the
world. The percentage of the French national budget devoted to the force
de frappe has increased about ten per cent in each of the last four years.
A fairly sizeable and sophisticated nuclear deterrent is the result; it
is being expanded to include German units. The Germans are increasingly
involved in missile R&D. The six French Polaris-type submarines announced
in 1963 for deployment in 1970 are operational. H-bombs and neutron bombs
are in stock in relatively large (hundreds, perhaps thousands) but unknown
numbers.

Thus no clear-cut European pattern has emerged. The European Economic
Community has not evolved into an integrated political community. NATO
continues to exist, though it is a weak alliance. There is some disquiet
in France, however, at the prospect of nuclear arms for the Germans: if
the Germans should succeed in reuniting, France will lose her primacy in
Western Europe. There is some consequent talk in French political circles
of a Franco-Soviet security pact. The U.S. is still formally on record
for the Lisbon goals for conventional forces, but the Europeans, though
polite, are deaf to these pleas. The Berlin issue remains unresolved,
essentially as in the early 1960's. There has been an agreement to disa-
gree.

Japan

In response to the Chinese nuclear threat, Japan has voted to con-
tinue the U.S.-Japan security arrangement and has begun to develop its
own nuclear deterrent as well. There are some fears in Tokyo that the
Chinese may be tempted to preempt the Japanese deterrent before it is com-
pleted; hence Tokyo looks with some anxiety to its American guarantees of
protection. The Japanese economic miracle continues: Japan is now the
third largest industrial power in the world, surpassing West Germany. Per
capita income is now about $1600 yearly and the boom has not yet begun to
slacken off. Japan gives economic aid to South and Southeast Asia and has
attempted to revive its traditional political-diplomatic role in these
areas; but since there is a rebirth of Japanese nationalism (and some
suggestion of ultra-nationalism as well), most Asians see in Japan's
collective security proposals the old "Co-Prosperity Sphere" idea and
are cool to the Japanese. Korea and Formosa are especially cool.

Underdeveloped Areas

The problems of economic and social development seem to have over-
whelmed the Afro-Asian countries. They are generally poor and disheart-
ened. Indians and Nigerians are merely discouraged; Burmese, Indonesian,
Egyptian hopes have been blighted. Western and Soviet influence is de-
clining in Afro-Asia. The Middle East especially resists the return of
Western influence. Latin America is turbulent and increasingly anti-U.S.

In most of Afro-Asia the more activist political elements show signs
of a frustration-aggression mechanism: semi-hysterical political move-
ments ("neo-Lumumbism") have sprung up. They agitate against remaining
"white" territorial and economic privileges--and, by extension, against
Western political and cultural influence though some parts of the former
French empire remain more or less docile and trade extensively with E.E.C.
In the Middle East, Iran is in turmoil. Indonesia cooperates closely with
Communist China in a dual alliance of aggressive powers arrayed against
the status quo. Relations between Indonesia and Britain and Australia are
tense. China backs Indonesian claims in New Guinea and Melanesia. In
the quarrel the U.S.S.R. is an uneasy neutral, as is India.

Military Implications for the U.S.

In this world, the United States foreign commitment continues, but
in somewhat attenuated form. There is a reduced probability of central
war with the Soviets; but there is a continuing problem of "brush-fire"
and small conventional wars--for example, against Indonesia, with the
possibility of the conflict escalating to low-level-nuclear violence
should the Chinese Communists intervene.

The U.S. defense budget therefore tends to hover around $50 billion
per annum (approximately six per cent of the GNP). Foreign aid (including
military), except to India, Formosa, and Korea, is considerably reduced.
There is light AICBM cover in the U.S., quite adequate, at least theo-
retically, to protect the 25 largest cities and the northeast U.S. indus-
trial heartland against anything the Chinese are likely to develop in the
next decade or two. While it is difficult to find support for military
budget increases, there is sufficient money for new weapons system develop-
ment (because of the cut-back in European forces and scaled-down costs of
SAC). However, procurement of new systems is difficult.

U.S. strategic forces are about the same as in the Alpha World, but
there is more emphasis on active and passive defense. There is less army
and TAC than today, but more than in the Alpha Worlds.

We also include a table setting forth the Beta-2 and Beta-3 Worlds
which were briefly referred to on page 271.

TABLE V

BETA-2 International Stresses with Major Power Realignments

		Symbols	Notes
2.	Major Realignments	++	E.g., U.S.-S.U. common interests; many alternative realignments may be specified (See pp. 99-100)
3.	Political-Economic Success Non-Industrialized Areas	+/-	(+) if power depends on these areas
14.	Unity of Blocs		
	a. Communist	--	In terms of 1963
	b. U.S. and Allies	--	alliances
	c. Third Bloc (or Blocs)	+/- to ++	Relative to 1963
15.	Aggressiveness of Blocs (or their members)		
	a. Communist	-	More aggressive in
	b. U.S. and Allies	-	3rd blocs
	c. Third Bloc (or Blocs)	+	
16.	Ideological and Cultural Successes of Blocs		
	a. Communist	-	
	b. U.S. and Allies	-	
	c. Third Bloc (or Blocs)	+	May be new Communist or capitalist grouping

TABLE VI

BETA-3 International Stresses with Successful Arms Control

		Symbols	Notes
4.	Powers of International Organizations	+	
5.	Arms Limitations	+ to ++	

We turn now to the Gamma Worlds, the Multipolar Worlds. The next
table sets forth Gamma-1.

TABLE VII

GAMMA-1 Rapid Nuclear Diffusion (or Extensive Nuclear Multipolarity)

		Symbols	Notes
1.	Multipolarity		
	a. Nuclear	+ to ++	
	b. Political-Economic	+ to ++	
3.	Political-Economic Success Non-Industrialized Areas	+	
5.	Arms Limitations	-	
7.	War-Dangerous Non-Confrontations	+	
8.	Minor Nuclear Diffusion	++	
9.	Credibility of Nuclear Use	+/- to +	Offense and Defense
10.	Military-Economic Strength of U.S. Relative to World		
	a. Nuclear Forces	+/-	
	b. Conventional Forces	-	
	c. Military-Economic Potential	+/-	
11.	Military-Economic Strength of U.S. "Firm" Allies Relative to World		
	a. Nuclear Forces	+	
	b. Conventional Forces	+/-	
	c. Military-Economic Potential	+	
17.	Special Dangers or Opportunities		Expansion of non-con- frontation wars involv- ing nuclear weapons

A literary realization of this world might go as follows:

This is a world in which present trends toward the spread of nuclear
weapons have gained. It is, in many respects, compatible with the Beta-1
World just outlined, but there is the added strain of extensive prolifera-
tion. Just how this proliferation affects the balance of power, and inter-
national politics in general, is not yet fully understood in the early
1970's. Many countries feel that nuclear arsenals are an important and
indispensable talisman of "great nationhood," but no one is quite able to
assess the actual effects of these weapons systems either in war or in

diplomatic bargaining. There is also much more confusion over the differ-
ences among declaratory, contingency and action policies and the relation
of these images and intent.

Arms Race

The "arms walk" of the early 1960's started to become an "arms race"
in 1965 when it became utterly clear that neither France, nor Communist
China--nor, for that matter, Egypt and Israel--could be prevented from ac-
quiring small-scale nuclear deterrents either by purchase or development.
The trend to nuclear weapons proliferation received a powerful impetus
from two developments in the United States: the first was the decision
in 1966 to use small kiloton weapons to seal the Himalayan passes against
the renewed Chinese invasion of India; the second was the unexpected suc-
cess of Project Plowshare. Though the U.S. first-use in the Himalayas
was nonlethal, in that no Chinese troops were directly killed by the
bursts, the use of nuclear weapons, even in this selective fashion, tended
to vitiate arms control arguments that nuclear weapons were "useless" to
other nations. Then Plowshare's success with low-kiloton underground bursts
(wo separate nuclear power stations by 1970) tended to condition world
opinion to the idea of nuclear power. Nuclear explosions are no longer
exotic, still less "unthinkable."

The Chinese themselves (who exploded an atomic device in 1966) have
conducted a terror diplomacy in Southeast Asia--again demonstrating the
potential political utility of such weapons. The arms race has
additionally been complicated by a qualitative development: for the
purpose of deterring countries with large ground forces, the neutron
bomb seems attractive both to Europe and to Japan. Both have done con-
siderable experimental work in this field, with results not yet made
public. However, it is clear that a new and simplified technology for
the production of nuclear weapons now exists and has been disseminated.

Nuclear Sharing

When the United States gold reserve declined to less than $10 bil-
lion (as against outstanding foreign obligations of $20 billion), Wash-
ington determined to hold the line at the absolute "protection point" of
$10 billion. As an alternative to devaluation of the dollar, it was de-
cided to enforce a ruthless cut in the Department of Defense budget;
overseas forces were reduced to token size. To compensate, the United
States adopted a policy of providing nuclear warheads (and where neces-
sary, medium-range delivery capability) to the most vulnerable of the
states menaced by Communism--Japan, Taiwan, Australia, and Turkey. Shortly
thereafter, France took Germany into formal nuclear partnership, collab-
orating on research and development; the United Kingdom revived its inde-
pendent deterrent, opting for low-level attack bombers equipped with a
750-mile ASM and a fleet of Polaris-type submarines.

The constellation of Gamma-1 nuclear powers is roughly as follows:

Major Nuclear	Second-Line Nuclear	"Barely" Nuclear	R&D
U.S.	U.K.	China	Italy
U.S.S.R.	Franco-German Strike Force*	Israel*	Argentina
	Japan	U.A.R.	Brazil
		South Africe	Mexico
		Yugoslavia*	
		India*	
		Turkey*	
		Taiwan*	
		Thailand*	
		Sweden	
		Switzerland	
		Indonesia***	
		Albania***	
		Cuba**	
		Australia*	
		Greece*	

*U.S. aid.
**Soviet aid (IRBM's, absolute transfer of title).
***Chinese aid (IRBM's, Chinese title and crews).

Soviet Union

Surprisingly enough, the Soviet Union seems relatively indifferent to these developments. Highly deterred already by the United States nuclear arsenal, and increasingly sceptical of possibilities for expansion into Western Europe, the Soviets have become something of a status quo power, anxious chiefly to hold what they have. They are acutely worried over persistent Chinese suggestions that the time has come to revise the "unequal treaties" which Tsarist Russia concluded with China in 1858, 1860, and 1881. The fate of Outer Mongolia border regions as well as of the Soviet maritime provinces and territories adjacent to Sinkiang and Manchuria are at stake and a major shift of Russian ground forces to the Far East is being debated in Moscow.

Third Areas

The recent acquisition of nuclear capability by the aforementioned countries has put a great gulf between these second-line, and even barely nuclear, powers and the non-nuclear fourth-rank. All the traditional international enmities and grievances of these non-nuclear states seem magnified by a sense of deprivation of nuclear responsibility, and many (as well as some of the barely nuclear powers) have acquired primitive bacteriological and chemical capabilities of little or uncertain effectiveness as a kind of self-compensation.

Indonesia, China's ally, however, has concluded an agreement for
the stationing of Chinese IRBM crews on Indonesian territory--an agree-
ment reminiscent of the Soviet understanding with Castro in 1962. These
IRBM's (developed, it appears, with the aid of free-lance German tech-
nicians) are capable of hitting Singapore and northern Australia. A
similar agreement was concluded with Albania, touching off a small Balkan
arms race in which Greece and Yugoslavia join with U.S. aid.

Military Implications for the U.S.

The general conditions of the Beta$_1$ World apply; but ABM systems
have greater value because of their potential utility against second-
line nuclear and barely nuclear powers like China and Cuba; they have
been widely deployed. The U.S. now has mid-course, high altitude (im-
proved Nike-Zeus) and low-to-medium altitude (improved Nike-X) systems.
It has publicly demonstrated (partly to deter threats and slow down
diffusion of ICBM's) that these systems actually work against even some-
what sophisticated attacks. The intellectual problems of deterrence are
becoming more complicated and the possibility of anonymous nuclear war
and other forms of covert warfare demand increasing attention.

We turn now to Delta-1 (Containment and Confrontation).

TABLE VIII

DELTA-1 Containment and Confrontation Between Major Power Blocs

		Symbols	Notes
2.	Major Realignments	-	
4.	Powers of International Organizations	-	
5.	Arms Limitations	-	
6.	War-Dangerous Confrontations	+	
7.	War-Dangerous Non-Confrontations	+	
10.	Military-Economic Strength of U.S. Relative to World		
	a. Nuclear	+/-	
	b. Conventional Forces	-	
	c. Military-Economic Potential	+/-	
11.	Military-Economic Strength of U.S. "Firm" Allies Relative to World		
	a. Nuclear	+/-	
	b. Conventional Forces	+/-	
	c. Military-Economic Potential	+/-	

TABLE VIII (Continued)

		Symbols	Notes
12.	U.S. Internationalism	+ to ++	
13.	Internal Cohesion of States		
	a. Communist States	+	
	b. U.S. and Allied States	+	
	c. Third Bloc(s) States	+/-	
14.	Unity of Blocs		
	a. Communist	+	
	b. U.S. and Allied States	+	
	c. Third Bloc (or Blocs)	+/-	
15.	Aggressiveness of Blocs (or their members)		
	a. Communist	+	
	b. U.S. and Allies	+	
	c. Third Bloc (or Blocs)	-	
16.	Ideological and Cultural Successes of Blocs		
	a. Communist	+	
	b. U.S. and Allies	+	
	c. Third Bloc (or Blocs)	-	
17.	Special Dangers or Opportunities		Major War

A literary realization of this world might go as follows.

The Delta$_1$ World is one in which the forces making for the erosion of the Soviet and Western blocs in the early 1960's have been reversed. The new cohesion of the blocs, plus the failure of the Afro-Asian area to produce major new actors on the international scene, have kept the political balance--and issues--essentially frozen, while weapons technology has gone on evolving.

Bloc Integration

In the mid-1960's a tentative detente carried out by ad hoc compromise between the Soviet Union and the United States had developed to a point where peaceful coexistence--in the genuine sense of the term-- seemed possible. But a sudden realignment of political forces within the Soviet Union (the victory of a powerful and aggressive military- Left Sectarian faction) reversed the course of events. In the spring of 1967 there was a Soviet blockade of Berlin, while East German forces attempted to take over West Berlin itself. Fighting between Communist

and NATO forces was held to company-level actions and no nuclear weapons were used. But when the status quo ante was restored (as a result of a U.S. threat to Cuba and unofficial threats of possible escalation to limited strategic war), the importance of NATO was established again and the Japanese, drawing the proper conclusions, offered the U.S. a new alliance. The 1966 crisis thus served to remind the West of the fundamental facts of East-West conflict and restored unity in the Western bloc. The French agreed to integrate their Mirage-IV and missile forces in return for the appointment of a French chief to the NATO nuclear command, along with a German and British deputy. The military-Left Sectarian faction in the U.S.S.R. was able to reimpose effective discipline on the Warsaw Pact states more or less easily--though some minor purges in the satellites were necessary. The Chinese--partly under pressure, partly in response to offers of aid, and partly from fear of the newly reinvigorated Japan and NATO--ended their schism. Both halves of the world now face the re-emergence of containment and confrontation.

Thus, the Soviet attempt against Berlin had the effect of so many of Stalin's earlier miscalculations: it consolidated the West. The Western powers now coordinate policies in Afro-Asia as well. In 1967, by the Second Treaty of Rome, they established the Atlantic Economic Community. Soviet prestige is high once again. The Communist parties in the rest of the world have begun to calculate that if both Russians and Chinese are militant, they do well to support the more powerful of the two: the Russians. Thus the U.S.S.R., newly confident, has begun to give China some nuclear and economic assistance.

Nuclear NATO and SEATO

In the wake of these events, NATO has accepted longstanding United States proposals for a multilateral nuclear force, but for one operating under majority rather than unanimous control. Targeting, however, and indeed command and control (via the new computerized systems) is integrated with SAC. Targeting doctrine authorizes a wide variety of immediate reciprocal, controlled responses to a wide spectrum of Soviet provocations without need of special permission from higher decision-making bodies. (See pages 107-108 for description of this policy.) Independent British and French national programs are abandoned.

In this new climate of opinion in the West, the Lisbon goals of 30 first-line divisions for NATO seem feasible. German manpower is more abundant than in the 1960's; this is due partly to the surprisingly rapid automation of the economy and to the increasing mobility of labor with E.E.C. Thus the German population pyramid shows enough males in the military age groups to allow the formation of seven additional armored divisions.

India, fearing the Sino-Soviets, joins SEATO. Other nations in the Asiatic periphery, fearing the newly armed and vigorous Chinese join either the Soviets or the Americans. There is a formal "SEATO" nuclear force,

but it is in practice a U.S. force augmented with Japanese and Indian con-
tributors assigned to Asian targets (and equipped with some specialized
weapons) with some sharing of U.S. control with Japan and India.

Cold War

These military developments have been paralleled by events within
the political warfare arena. Communist propaganda is increasingly
violent in tone. Communist conduct in Central Europe worries Washington.
In the Delta World the Soviet strategic forces are approximately 50 per
cent larger than in the Beta World, and conventional land forces are
larger still. While this Soviet military program has frozen living
standards within the bloc, it has not forced any cutbacks, and the Soviet
regime has not hesitated to use force to damp down discontent. Soviet
submarines now regularly appear in large numbers in the Mediterranean,
the Atlantic, the Indian and the other seas of the world.

In Asia, Africa, and Latin America the Cold War is raging more
fiercely than at any time since 1953. Since the Chinese now recognize
the U.S.S.R. as supreme, an amicable division of spheres of influence
within the Communist bloc seems to be in effect: non-Communist Asia
is primarily allocated to the Chinese Communists for conquest. The
Russians together with the assiduously loyal Czechs are active every-
where else. Essential resources (e.g., nonferrous metals, oil), stra-
tegic locations (e.g., Singapore, Gibraltar), and key political organi-
zations are marked out for the Communist offensive.

Japan and South Korea have consequently mended their relations with
one another. Together with the Philippines and Taiwan they are seeking
associate status with the Atlantic Community. The neutrals are badly
frightened.

Military Implications for the United States

The military budget has increased to $80 billion yearly (but is
still less than ten per cent of the GNP) and there is no difficulty
finding funds for new weapons systems. The actual likelihood of war,
nuclear and nonnuclear, is increased in this world. But the problems
of deterrence are relatively simple since war-fighting strategy is still
a two-body problem. The context is not one of a dozen or more active
nuclear powers and no threat of anonymous warfare complicates the picture.

Finally we terminate this appendix with the Epsilon-1 World (Communism on the March).

TABLE IX

EPSILON-1 "Communism on the March"

		Symbols	Notes
4.	Powers of International Organizations	-	
6.	War-Dangerous Confrontations	+ to +++	
7.	War-Dangerous Non-Confrontations	+ to ++	
9.	Credibility of Nuclear Use	- to +:	For offense or defense
10.	Military-Economic Strength of U.S. Relative to World		
	a. Nuclear	+/-	
	b. Conventional Forces	-	
	c. Military-Economic Potential	+/-	
11.	Military-Economic Strength of U.S. "Firm" Allies Relative to World		
	a. Nuclear	+/- to +	
	b. Conventional Forces	- to +	
	c. Military-Economic Potential	+	
13.	Internal Cohesion of States		
	a. Communist States	+	
	b. U.S. and Allied States	-	
	c. Third Bloc(s) States	-	
14.	Unity of Blocs		
	a. Communist	+	
	b. U.S. and Allies	-	
	c. Third Bloc (or Blocs)	-	
15.	Aggressiveness of Blocs (or their members)		
	a. Communist	+	
	b. U.S. and Allies	-	
	c. Third Bloc (or Blocs)	-	
17.	Special Dangers or Opportunities		Territorial loss or internal Communist takeover in allied or neutral areas

A literary realization of this world might go as follows.

The Epsilon World resembles the preceding Delta Worlds, except that the reversal of the early 1960's trends has been asymmetrical: the Soviet bloc has regained its cohesion and is pushing forward, while the Western alliance has continued to disintegrate. Soviet aggressions in the past have tended to force unity on the Western camp; in the early 1970's the strains and defeats of the Cold War have begun to tell on the West. Communism is widely believed to be the "wave of the future."

Soviet Union

Dissatisfaction within the Soviet bloc with the policies of N. S. Khrushchev led to his downfall. The momentum of world revolution had faltered, the unity and prestige of the Communist movement had eroded under his programs. As a result, he was replaced in the summer of 1966 by a more aggressive coalition of hard-line Party apartchiki backed by a resurgent military. Negotiations on Berlin in the fall of 1965 led to the neutralization of West and East Berlin under weak U.N. control; but 12 months later (following Khrushchev's fall) a series of Communist-sponsored demonstrations and disorders in Berlin led to a Communist coup d'etat backed by the threat of East German and Soviet intervention. The simultaneous announcement of the conclusion of a separate peace and mutual defense treaty between the German Democratic Republic and the U.S.S.R. helped to deter the West from countermeasures. In West Germany there was a catastrophic drop in morale, and in all NATO as well. Shortly thereafter, the Soviet Union made serious threats against Iran and Afghanistan. The formation of "United Front" governments, including Communists in the posts of Interior and Defense, were demanded. To back demands the Soviets arranged for insurrection along the Russo-Afghan border and guerrilla war in centers of Tudeh (Communist) Party strength in Iran. Iran and Afghanistan both resisted for a time, but in the end acceded, and non-Communist leaders went into exile or hiding. The capitulation of these two countries to the Soviet ultimatums sent tremors through the Afro-Asian world: even the Chinese Communists hastened to patch up their quarrel with Moscow. Sino-Soviet policies now are closely coordinated, at least on the surface, although it is possible to perceive divergent long-range ambitions and interests between the two; nevertheless, at present the two powers practice "squeeze" tactics against their victims.

Soviet forces, nuclear and conventional, are even larger than in the Gamma World.

Asia

The newly unified Communist bloc soon began an extensive campaign against Asia. Laos and Vietnam fell to massive Communist guerrilla campaigns. Cambodia teeters on the verge of surrender, hoping against hope that help will come from somewhere. Large delegations of Soviet "diplomatic" and "foreign aid" personnel are now active in the capitals of almost all Asiatic countries: and both India and Japan are in the process of completing alliance treaties with the Soviet Union (ostensibly nonaggression pacts, but actually political concessions to the U.S.S.R. and also--the Indians and Japanese hope--forms of insurance against the Chinese).

Western Europe

After the controversy over England's admission to E.E.C. and the consequent blows to the Common Market "mystique," the E.E.C. never again attained the growth rate it had reached at the beginning of the 1960's. There has been a revision of the Treaty of Rome which has lessened economic cooperation, and there is a threat of more concessions to economic nationalism and isolationism. Independent West German negotiations with the Soviet Union (and implicitly, East Germany) seek to establish unification on terms which the U.S. sees as dangerous to the long-range survival of democratic forces in Germany.

There is general dissatisfaction with the leaders and main parties of Western Europe. The Labour Party won power in England in 1964 and proceeded to infect Western Europe with defeatism. The socialists on the Continent are hardly distinguishable from the Swiss bourgeoisie. A sense of drift pervades Europe. Sentimental peace movements are strong. The unasked question looming over all is: "Are we next on the Soviet list?" In this setting, a Left Socialist-Communist coalition took power in Italy in 1968, and while the Socialists control the ministries of Defense and Foreign Affairs, they refuse more than nominal cooperation in NATO. Communist voting strength has considerably increased in France.

NATO Problems

NATO is largely impotent. The U.S. alone is the effective defender of Western Europe, but problems are magnified by America's unpopularity and the indecision and weakness of its allies. The United States urges the necessity of stronger conventional forces, but without success. The French force de frappe has been allowed to deteriorate in quality, as has the British deterrent; but neither France nor England strongly support the NATO deterrent either. Thus neither the NATO shield nor sword are much good. The Europeans are more frightened by their own nuclear forces than anybody else. Ground forces are, as a whole, underequipped, undertrained ("conditionally suitable for defense"), and undermanned.